The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

This Bulletin will be sent free to any citizen of the State upon request

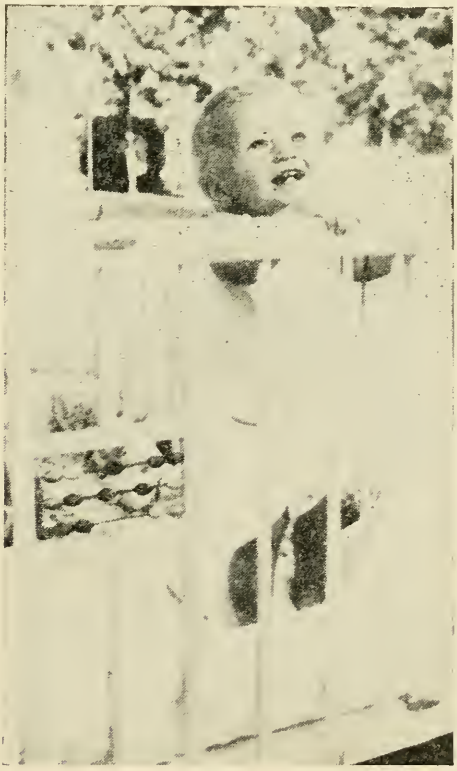
Entered as second-class matter at Postoffice at Raleigh, N. C., under Act of July 16, 1894. Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

Vol. 54 JANUARY, 1939 No. 1

DIPHTHERIA

2,056 CASES IN NORTH CAROLINA IN 1937

"Nature Protects Me My First Six Months"



"Surely, Mother Will Have Me Protected For Life"

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils
Appendicitis
Cancer
Constipation
Chickenpox
Diabetes
Diphtheria
Don't Spit Placards
Eyes
Flies
Fly Placards
German Measles
Health Education
Hookworm Disease
Infantile Paralysis
Influenza
Malaria
Measles
Pellagra
Residential Sewage Disposal Plants
Sanitary Privies
Scarlet Fever
Smallpox
Teeth
Tuberculosis
Tuberculosis Placards
Typhoid Fever
Typhoid Placards
Venereal Diseases
Vitamins
Water Supplies
Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care
Prenatal Letters (series of nine monthly letters)
The Expectant Mother
Breast Feeding
Infant Care. The Prevention of Infantile Diarrhea.
Table of Heights and Weights
Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Instructions for North Carolina Midwives.

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THE Health Bulletin

PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. 54 JANUARY, 1939 No. 1

Notes and Comment

By THE EDITOR

WITH this issue the *Health Bulletin* enters its fifty-fourth year, the present number being Number 1 of Volume 54. It has thus completed fifty-three years of its monthly visits to the citizens of the State of North Carolina who are interested enough to write and ask that it be sent to them.

This issue goes into seventy-six counties with organized full-time health department service, either on a county unit or a district basis, and in some instances with a city health department at the county-seat and a county health department functioning for the county.

The reader may compare the situation in this State now with reference to public health service with this month fifty-four years ago when Dr. Thomas Fanning Wood, the first State Health Officer, issued the first number. At that time the total appropriation for the State Board of Health work was $2,000 annually. Dr. Wood, of course, worked on a part-time basis and a part-time clerk in his office wrote out the script in long-hand for the first publication. Today in these seventy-six counties, there are more than five hundred full-time workers, including health officers, nurses, clerical help, sanitary inspectors and engineers, etc. This is exclusive of the State Board of Health organization and also exclusive of the many full-time employees of city water departments such as chemists and engineers. It is the conviction of this writer that no money that the State and the localities have ever spent has resulted in more benefit to the citizens than that of the health workers. Many of these workers are unknown to the general public, their names seldom occur in the State papers, they are not given honorary degrees by the State's colleges, they are seldom ever any of them elected to office of any kind. Many of them receive daily complaints from citizens about trivial matters. Most of them take such patiently and try to explain the purpose of their work and the protection that it affords the people. The *Health Bulletin* as a monthly reminder throughout all these more than fifty years has served to keep before the people of the State many of the practical requirements of public health practice. All of the contributors and the editors who have managed the affairs of the *Health Bulletin* and who have tried to get it out month by month throughout the years have always had uppermost in their minds the hope that they would be providing information that might enable people to know how to protect themselves from preventable diseases and untimely deaths. About 46,000 numbers go out each month. As was pointed out some time ago, the little publication goes each month to people living at nearly 1,400 out of the 1,500 post offices in the State, it goes into every county and to some

readers on almost every rural delivery route in the State.

The Editor is frequently encouraged in many unexpected ways. For example, sometime ago on a particularly blue Monday morning a card requesting that some special literature be sent to two individuals of a certain county was received. The card was dated at the particular town mentioned simply "Sunday night." It was sent in from a R. F. D. route and started off by saying: "Dear Editor, I hasten to assure you that your *Health Bulletin* is profitably read by many families who never write to say so." Then went on to add the names whom they wished to receive the *Health Bulletin* in the future.

It is pleasant to think that the idea expressed by the writer that the publication may be profitably read by families who never write to say so is a fact. Anyhow, it is hoped that that is a fact. An effort is always made in every issue to try to publish at least one article carrying information which would be helpful to any reader. That idea has been the key effort running through every issue of the publication for many years. It is pleasant to know that there are readers comprising hundreds of young people who have set up housekeeping and who are now rearing families of their own whose parents received the *Health Bulletin* through the years and during which time the young folks became interested in the material published.

In the beginning of this new year, it seems to many people that there are more problems confronting the world than at any time since the close of the Dark Ages. The complexities of modern life and the strain of living today puts greater stress on the nervous system of the average individual than probably ever before in the history of the world. It is more necessary today to take thought of the physical, mental and moral health of the individual and of the public than ever before. On the other hand, more protection against pestilential diseases is afforded the people of the world today than ever before. In the past, great plagues such as yellow fever, bubonic plague, smallpox and other epidemic diseases have decimated the population of the world. It varies in the opinion of some historians to the extent of as much as 50 per cent of the population of the world at one time. With the exception of influenza, toward the control of which little progress has been made, the great cities and thickly populated sections of the world are in little danger. All of this is due directly to the protection afforded by the scientists and active workers in the public health field.

In the year that the *Health Bulletin* was first published, it was the common rule in North Carolina for every family to have typhoid fever among some of its members before the children of the family reached maturity, and it has been estimated that at least one out of four members of the average family died of the disease before all the other children reached maturity. The average family lost a large per cent of the children born as a result of the diarrheal diseases of childhood before reaching the end of the first year of life.

There is a long way to go in the field of prevention of disease before the State reaches the position it ought to occupy as one of the low mortality States, in the matter of infant deaths and deaths from such diseases as diphtheria. Diphtheria can and should be completely prevented, but in the face of that fact the State has had a higher death rate from diphtheria and a higher case rate during the last two or three years than most

of the other States. In the field of total infant deaths, it has had a little better record, but not much.

The discouraging feature of the past year's work has been that infant deaths have not continued the downward trend started the year before, but apparently a larger number have occurred than occurred in 1937, although complete and accurate data are not yet available.

It is with confidence that the faces of public health workers of this State are set toward the future, and it is hoped that the new year will result in greater progress in public health work than ever before in the history of the organization.

* * * *

It may be this is another case of the proverbial fool marching around in an area avoided by the angels. We hope, however, that our intentions may be understood. We have no intention or desire to criticise in any way the official advertising campaign now being carried on by another department of the State Government. It is good work and one undoubtedly fully justified in every way. It is our desire, however, to call attention to a matter frequently overlooked by commercial advertisers of every description and that is the matter of comparative values.

People in ever increasing numbers are coming through our State now on the way to various winter resorts of the far South. They are coming in winter and in summer, especially since the opening of the great national parks in the western section of the State, the development of the historical pageant of the "Lost Colony" at Manteo, and many other attractions.

The purpose of this note is to point out that the advertising to be effective must be backed up in every way. A few smiling accommodating filling station operators, serving the passing motorists in clean stations with approved sanitary facilities, kept spotlessly clean twenty-four hours a day, is one essential requirement. Another is that a friendly, accommodating hotel clerk with good clean dining room service purveying clean, well-cooked food at reasonable prices is another essential. Boiled down to a brief statement, it may be stated in this way: Cook the food well, serve it attractively on a clean table with good coffee when they want it and keep the toilets in hotels, restaurants, boarding houses, tourist homes and filling stations spotlessly clean and functioning properly. These few simple items will mean more in building good-will, attracting permanent residents or return tourists than an advertisement on every billboard and a double-column in every newspaper from Seattle to Sandy Hook every day in the year.

We wish to lend our endorsement to the concluding paragraph of an editorial appearing in the *News and Observer* some weeks ago, to-wit:

"Parks and printer's ink, highways and historical markers, maps and guides and monuments may serve North Carolina if North Carolina wants tourists. But soap and water, frequently and energetically applied, ought not to be forgotten. A lack of it will not be forgotten by visitors."

This matter of comparative values should be stressed a great deal more than it is. Illustrations are numberless, but a few will suffice for this purpose. For example: The men who perfected the process of pasteurization of milk and now added to that the use of what is called the new phosphatase test enabling short-time pasteurization of milk at high temperature have done more for the comfort and the safety and happiness of the people of the world than all the works of "art" ever perfected by the hand of man. The people who finally against great odds succeeded

in perfecting the chlorination treatment of drinking water and convinced the world of the value of it may be placed in the same classification. Literally millions of people this year will be living in safety and comfort as a direct result of these two processes who without them would have been dead long ago.

By all means, let's keep up our advertising, but let's back it up with real stuff when strangers come among us. We have sufficient assets and attractions in this State to be able to tell the simple truth, provided we confine ourselves to the truth and guarantee the safety and comfort of our visitors.

* * * *

At the beginning of this year an effort is being made more sincere and intensive than ever before to control and eliminate diphtheria from this State. It is time that the people were about it. For the last two or three years, as briefly pointed out in these columns, the diphtheria rate in North Carolina has been excessively high. It should be an easy matter, now, with the use of alum precipitated toxoid to prevent diphtheria in ninety-nine out of every one hundred babies born in the State. Two doses of toxoid, a fresh product properly manufactured and safely conveyed to the physician or the health officer, and given properly in two doses at, at least, one week's interval, should protect ninety-nine out of every one hundred babies born. The State Board of Health, through the Department of Maternal and Child Health Service, for the last three years has been supplying free of charge toxoid to immunize at least a fourth of all the babies born in the State between the ages of six and twelve months.

By the time these pages reach our readers, a bill will probably be in the Legislature to compel the immunization of every baby between six and twelve months. This bill should pass and it should be executed with 100 per cent success.

Many of the county health officers have made special efforts which should receive commendation everywhere for getting immunizations properly done. It is no use to try to single them out. The people of their counties know who they are.

Continued efforts must be made to control typhoid, and such efforts will have to be continued for many years to come. The same intensive efforts must be made to control diphtheria.

Local Health Service in North Carolina Today

By R. E. Fox, M. D., Director, Division of County Health Work

IN the span of twenty-seven years since the inauguration of the first full-time health department in Guilford County in the year 1911, the growth of local health service in North Carolina has steadily advanced. Beginning with this one county health unit in 1911, the number gradually increased until 1930, when there were thirty-nine county health organizations in North Carolina. The depression years witnessed a discontinuance of three health services. The number of full-time local health organizations remained at thirty-six from 1932 through 1933. The period since 1934 has been characterized by a marked growth in the development of local health services, the number increasing from thirty-six to a total of seventy-six counties now participating in full-time local health organization.

This growth in local health ser-

vices has been brought about by a deeper realization on the part of the citizens of North Carolina that a local health department is an essential part of the local governmental service. The stimulus that made possible the establishment of these services was undoubtedly the passage of the Social Security Bill, which made available to the several States sums of money for developing health services, these funds being administered through two distinct Federal agencies—the United States Public Health Service and the Children's Bureau. Our own State Legislature has given the State Board of Health additional funds during this period which have furthered public health development.

An added stimulus has been the interest shown by the public in the so-called "social diseases"; namely, syphilis, gonorrhea and chancroid. This interest on the part of the public brought about the passage of the LaFollette-Bulwinkle Bill appropriating additional sums of money for the control of these diseases. Not only have governmental agencies been interested in this problem, but North Carolina was very fortunate in being the recipient of funds from a private foundation to aid in the fight against the scourge of venereal diseases. The Smith Reynolds Foundation grant has not only helped in the fight against these diseases, but has stimulated additional counties within the State to establish full-time local health organizations.

A greater public demand has been created for preventive health services; naturally, the question arises as to the type of service that is offered by these full-time county health departments.

Public Health is the science and the art of preventing disease, prolonging life, and promoting physical health and efficiency through organized community effort. This is accomplished through sanitation of the environment, the control of community infections, the education of the individual in the principles of personal and community hygiene, the organization of medical and nursing service for the early diagnosis and preventive treatment of disease, and the development of the social machinery which will insure to every individual a standard of living adequate for the maintenance of health, as well as the organization of these benefits in such fashion as will enable every citizen to realize his birthright of health and longevity.

These ideals are accomplished by the local health service providing the citizens of a given community with the following essential services:

1. School health supervision, including physical examinations of school children for defects.

2. Immunization service is provided for the control of smallpox, diphtheria and typhoid fever.

3. An organization for the correction of physical defects is perfected, such defects being corrected by competent physicians of the community.

4. There is an organized program conducted to reduce maternal and infant deaths. It is in this program that a large portion of the Children's Bureau Funds available to North Carolina have been so effectively utilized under the able direction of Dr. G. M. Cooper.

5. Another essential service is the program for correcting physical deformities among crippled children.

6. Local health departments conduct venereal disease programs, providing clinical facilities for those unable to pay for these services. This is done in cooperation with the local medical profession.

7. Local health departments, through the aid and assistance of the North Carolina State Sanatorium, conduct tuberculosis clinics to curtail the rav-

ages of this disease.

8. Local health services conduct an educational and supervisory program for the correction of environmental sanitation, placing particular emphasis on safe excreta disposal, malaria control, making provision for a pure and wholesome water supply, a pure milk supply and pure food for the citizens of the local community and the traveling public.

9. The local health departments conduct epidemiological investigations and institute measures for the prevention of the spread of communicable diseases.

10. The public health nurses on the staffs of the local health departments visit homes of school children who are absent because of communicable diseases and in whom physical defects may be found, taking such steps as may be necessary to prevent the spread of disease and encourage the correction of physical defects. These nurses also visit homes in the interest of expectant mothers, providing prenatal care, encouraging physical examinations and pointing out that the services of a regularly licensed physician are essential for the period of confinement.

11. The local health departments supervise midwives, instructing them in elementary hygiene, enjoining them from engaging in practices for which they are not qualified, and which, in turn, are dangerous procedures and often result in the death of the mother or the infant.

12. There is provided in practically every local health service an oral hygiene program in cooperation with the Division of Oral Hygiene of the North Carolina State Board of Health for the education of all school children and for the correction of dental defects in the underprivileged group less than thirteen years of age.

To effectively administer the technical procedures expected of the local health department, it is necessary that all personnel employed shall have special training in public health before being employed. All public health personnel who have been employed through the expansion of the public health program in the last three years have had this special training.

The population of the State of North Carolina now served by local health organizations in the seventy-six counties, including six city health departments, is 85.8 per cent, leaving only 14.2 per cent in the twenty-four counties not now enjoying the health protection afforded by the services of full-time local health organizations. Serving these 2,720,000 citizens of our State are 507 trained and experienced public health workers.

Your State Board of Health looks forward to the day when it can be said that the entire population of North Carolina is provided with an adequate local public health service. In order to accomplish this goal, it is necessary that additional funds be provided. The Federal Government has assumed its responsibility. The counties are assuming theirs. Your State Board of Health has requested your State Legislature to provide additional funds to make possible an organization of local health service in every community in the State. The present allocations of funds to local health services from the various agencies are:

Local	68.7 per cent
State	7.4 per cent
Federal	18.5 per cent
Other agencies	5.4 per cent

and if our Legislature grants the request of the State Board of Health they would be contributing only 18.7 per cent of the total money now being expended in local health service.

It should be borne in mind in mentioning the accomplishments made thus far that it is realized the service now being rendered is in no way adequate, practically all of our ser-

vices being minimum health organizations. When the citizens of the State of North Carolina want expansions in these services and are willing to let it be known, we confidently expect ways and means will be provided for adequate protection of the public health interests of our citizens. May we suggest to the citizens of those counties not now provided with health departments that they investigate the services being rendered in those areas served by local health organizations and exercise their prerogatives as citizens to insure every community in the State with at least a minimum health organization.

The following counties have no organized full-time health department. Their people are therefore denied the benefits of participation in the great public health program now being developed by the State Board of Health in cooperation with the Federal Government and the counties. An exception in the list may be noted in the case of Brunswick and Pamlico Counties, which have some full-time nurse service:

Alexander	Madison
Brunswick	McDowell
Camden	Mitchell
Carteret	Montgomery
Caswell	Onslow
Gates	Pamlico
Henderson	Pasquotank
Hoke	Pender
Iredell	Perquimans
Jones	Rockingham
Lee	Scotland
Lincoln	Warren

Legislative Program of the State Board of Health

Legislature Will Be Asked to Strengthen and Advance Board's Present Health Program

LEGISLATION that will enable the State Board of Health to strengthen and expand its program of public health work and further reduce the State's death and sickness rates will be sought from the 1939 Legislature. The legislative program that has been adopted by the Board is directed toward meeting five of its major health needs, as here outlined:

1. Provision for increasing and extending county health services so as to include the one hundred counties in the State, and all the people. At present seventy-six counties, or approximately 85 per cent of the population, are privileged to enjoy some form of health supervision provided by joint support of county and State, while the remaining twenty-four counties, or 15 per cent of the population, are without this service. To secure some type of local full-time health service for the one hundred counties is the purpose of this bill.

2. Means to promote and control the sanitary conditions of highway and roadside establishments, to insure a greater degree of safety and comfort to the traveling public.

3. Compulsory immunization against diphtheria of all children between six and twelve months of age. Through compulsory immunization some States have brought this terrible killer of little children completely under control, while North Carolina continues to let more than two thousand children contract the disease every year. North Carolina lost one hundred and sixty-eight babies from diphtheria during the last year for which reports are tabulated.

4. A law that will require both

the man and the woman making application for a marriage license to present a certificate showing the nonexistence of any venereal disease or tuberculosis in the infectious stage. This legislation is emperative as an important syphilis control measure, and also in view of the fact that the State has no adequate law on its books to safeguard marriage from the ravages of certain diseases and mental conditions that are destructive to health and family life.

5. Legislation that will require a blood test for all expectant mothers as part of a prenatal examination for every such woman. This, too, is an important measure aimed at the control of syphilis, especially syphilis in babies. This legislation is based on a most important factor discovered by medical science in regard to the treatment of syphilis—that congenital syphilis can be prevented in more than 90 per cent of the cases if the expectant mother who is found to have syphilis is competently treated by the fifth month of pregnancy. Three States—New York, New Jersey and Rhode Island—now have such a law. One of its provisions requires that all persons licensed to attend women in pregnancy must administer or cause to be administered a standard serological test for syphilis and must indicate on the birth or still-birth certificate the fact that the test was made, and when it was made, or give reason why it was not made. However, the law does not require that the results of such tests be indicated on the birth certificate.

The enactment of these provisions into laws will not only place North Carolina in line with a score of other States which are making progress in lowering their death rates and providing health protection for all their people, but it will enable the State to go forward on a constructive program that has already been long delayed for lack of legislation. The measures sought are conservative and fair to all the people. They are not experimental, but on the other hand, are backed by science and the success of repeated applications.

Pneumonia

By J. C. KNOX, M. D., Director, Division of Epidemiology, North Carolina State Board of Health

PNEUMONIA is a disease that offers a challenge to the medical profession. Over a long period of years it has consistently taken its toll of human lives. For the greater part, these lives have fallen into those age groups comprising the very young and the very old. Because pneumonia has been found to be the cause of death in old people so often, it has been called the "friend of the aged," since its victims are thus spared the discomforts and helplessness associated with growing old.

Many robust, healthy young adults, however, are taken away in the prime of life by an attack of this disease. It is at such times that our helplessness in combating pneumonia makes us feel the need of some sure method of dealing with it.

Pneumonia is of two general types —lobar and broncho. The first affects a lobe of one or the other of the lungs, or perhaps the lobes of both. The second type named affects smaller areas of the lung tissue. Lobar pneumonia is almost always caused by a specific germ known as the pneumococcus. Of these germs there are four general types—I, II, III and IV. Type IV in reality is a group of germs within itself.

By careful study it has been found

that the germ causing a particular case of pneumonia is acquired from a pneumonia patient and carried around in the nose and throat of his or her contacts, who in their turn may spread the germ to others so that eventually it reaches persons susceptible to the disease, which of course results in another case. In order to avoid this, it is necessary that a patient ill with this disease be isolated and all unnecessary contacts be excluded. Furthermore, this is an added protection to the patient who is already sick, because some visitor may bring in to that person during the winter months some type of germ that will complicate pneumonia and make it more difficult for the patient to combat the infection he already has.

During the past few years there has been much work done in the larger medical centers with serums for the treatment of pneumonia. These studies have been rewarded by the development of sera that is specific for certain types of pneumonia. In these cases if the serum for a certain type of pneumonia is given early and in sufficient quantities there is remarkable improvement in the case and the fatality is lowered by approximately half when compared with cases not receiving such treatment. Surely, such methods in the handling of these cases will materially affect the pneumonia death rate in North Carolina.

The following figures will show the need for some such curative serum:

Number of Deaths Due to Lobar Pneumonia in North Carolina 1933 to 1937, inclusive

Year	White	Colored	Total
1933	640	404	1,044
1934	1,018	586	1,604
1935	1,091	522	1,613
1936	1,147	659	1,806
1937	896	625	1,521

It probably would not be exaggerating to say that if all cases of pneumonia for which there is a definite serum obtainable, were to receive it there would be from three hundred to five hundred people to recover who otherwise would die.

In order that specific pneumonia serum be used effectively it is necessary that the correct diagnosis as to the type of germ be made and that it be made early. Diagnosis of pneumonia must therefore be made in a laboratory equipped for performing the necessary tests. Last spring at Duke University Medical School laboratory workers were given a course of instruction in making these tests. The following list gives the names and location of those qualified to make the test:

LIST OF PNEUMONIA TYPING STATIONS AND QUALIFIED TECHNICIANS

(Technicians trained at Duke University, January, 1938.)

CITY OR TOWN	TECHNICIAN'S NAME	HOSPITAL OR OTHER ADDRESS
Albemarle	Mr. L. H. Bright	Yadkin Hospital
Asheboro	Miss Elizabeth Chapman	Randolph County Hospital
Asheville	Miss Frances Boyd	Ashton Park Hospital
Asheville	Mr. C. C. Demaree	Health Department
Banner Elk	Mr. J. B. Pritchett	Grace Hospital
Bayboro	Miss S. W. Campen	County Health Department
Burlington	Miss Marie Roberts	Alamance General Hospital
Charlotte	Miss Sarah Hodges	St. Peters Hospital
Dunn	‡Dr. Charles Highsmith	Dunn
Durham	Miss H. J. McClure	Health Department
Durham	Mr. B. F. Vestal	Health Department
Durham	*Dr. R. L. Holloway	Durham
Edenton	Miss Frye Pettus	Health Department
Elkin	Miss Sarah Baptist	Hugh Chatham Memorial Hospital
Elizabeth City	Miss Martha Anderson	Medical Building

CITY OR TOWN	TECHNICIAN'S NAME	HOSPITAL OR OTHER ADDRESS
Enfield	Mrs. Evaline Fleming	Care Dr. Nicholson
Erwin	Miss Nellie Sue O'Briant	Good Hope Hospital
Fayetteville	Miss Margaret Green	Health Department
Fayetteville	Mrs. John M. Harry	Highsmith Hospital
Fletcher	Miss Ethel Earwood	Mountain Sanatorium
Goldsboro	Miss Dell Winstead	Care Dr. W. H. Smith
Greensboro	Miss Marie Smith	Wesley Long Green Hospital
Greensboro	*Dr. A. J. Tannenbaum	Greensboro
Greensboro	Mrs. Grover S. Mumford	Health Department
Greensboro	Miss Ernestone Gunthorp	Care Drs. Gilmore and Shelbin
Greenville	Miss Thelma Chinnis	Pitt Hospital
Hickory	Miss Ella Raby	Richard Baker Hospital
High Point	Miss Grace Freeland	City Health Department
High Point	Mrs. M. K. Jones	Burrus Hospital
Huntersville	Mr. R. K. Davis	Mecklenburg Sanatorium
Jamestown	Mr. M. F. Massey	Guilford County Sanatorium
Kenansville	*Dr. R. L. Carr	Health Officer, Duplin Co.
Leaksville	Miss Elizabeth Stewart	Leaksville Hospital
Lenoir	Miss Helen Parrott	Blackwelder Hospital
Louisburg	Mrs. Pauline Hobgood	Care Dr. J. A. Fulghum
Lumberton	Miss Constance Herritage	Thompson Memorial Hospital
Morehead City	Miss Katherine Kirch	Care Dr. Ben Royal
Morganton	Miss Zonie Caffey	Grace Hospital
Morganton	Miss Effie Williams	Dr. Kirksey's Office
Mount Airy	Miss L. McAlexander	Martin Memorial Hospital
Mount Airy	Mrs. E. Fogleman	Care Drs. Mitchell and Smith
Mount Olive	Mrs. A. Emma Gringer	Care Dr. J. W. Wilkins
Oxford	Miss Leone Campbell	Maria Parham Hospital
Oxford	Miss Florence Sinclair	Brantwood Hospital
Pilot Mountain	*Dr. J. M. Flippin	Pilot Mountain
Raleigh	Miss Anna Johnson	County Health Department
Raleigh	Miss Noelle Thomson	State Hospital
Raleigh	Miss Mary E. Hunter	Mary Elizabeth Hospital
Red Springs	Miss Thelma McPhaul	Care Dr. R. D. McMillan
Reidsville	*Dr. P. W. Fetzer	Reidsville
Reidsville	Miss Irene Maxwell	Memorial Hospital
Rocky Mount	Miss Mary Sue Hannah	City Health Department
Rocky Mount	Miss Thelma Harper	Care Dr. C. T. Smith
Sanford	Miss Ethel Crouse	Lee County Hospital
Shelby	Miss Mary Hanna	Shelby Hospital
Smithfield	*Dr. G. A. McLemore	Smithfield
Statesville	Miss Grace Dave	Long's Hospital
Snow Hill	*Dr. W. W. Whittington	Snow Hill
Snow Hill	*Dr. E. H. Ellinwood	Snow Hill
Tabor City	Mrs. W. N. Williams	Williams Clinic Hospital
Wadesboro	Miss Catherine Via	Anson Sanatorium
Washington	Miss Helen Yert	Tayloe Hospital
Waynesville	Mrs. Elizabeth Cuddeback	Health Department
North Wilkesboro	Miss Evelyn Little	Wilkes Hospital
Wilmington	Mrs. S. C. Cantwell	Health Department
Winston-Salem	Miss Ellen March	Health Department
Winston-Salem	Miss Lucinda Collins	City Hospital
Winston-Salem	Mrs. Walter Mickle	City Memorial Hospital

*–Also registered for course. ‡–Dr. Charles Highsmith recently died.

The only drawback to a pneumonia control program is the fact that the serum is expensive. Since pneumonia attacks the rich and the poor alike, it is a problem to provide this expensive serum for treatment of those unable financially to purchase it. It would be a most worthwhile service if the State of North Carolina could manufacture the sera for treatment of pneumonia, thus reducing the cost so that all people ill of this disease might have it when it is needed.

As early as 1931, the Commonwealth of Massachusetts inaugurated a serum treatment program, and recently the North Carolina State Board of Health, with the cooperation of the North Carolina Medical Society and the medical school and faculty of Duke University, set up a State Commission for the Study and Control of Pneumonia, of which Dr. Hubert B. Haywood, of Raleigh, member of the State Board of Health, is chairman.

It is wise to emphasize the fact that while serum must be used in the

early stages of pneumonia to insure favorable results, it cannot be used successfully unless the type of pneumonia is definitely determined. Hence, the necessity for a patient to consult his physician promptly, in order that arrangements for typing may be made at the moment pneumonia develops. The doctor is able to determine this. The patient is not.

State Items

In a recent issue of the *Beaufort News*, there is an obituary notice which records the death of a two and one-half year old girl of that county as a result of an attack of diphtheria. Under the short obituary notice published by the editor is a contributed poem signed by the parents. We quote the following passage:

"As the days passed, she grew and grew.
How we loved her no one knew."

The pang to us in such a notice is that this was simply one more death which was probably unnecessary. These parents loved her, but they did not love her sufficiently to take her to a physician and have her immunized against diphtheria. This could have been done any time from the age of six months up to half a year ago, and she may not have died of diphtheria.

Carteret County, speaking in a civic sense, loves its children, but it does not love them sufficiently to make the small appropriation in that county for a cooperative plan of health work which would provide a whole-time health officer with nurses and other necessary personnel to work in that county, a part of whose duties would be to see that all the babies are immunized against diphtheria. It is hoped that no other sacrifice will be made in that county in such an unnecessary manner, and in no other county, whether they have a health department or not, until their people at least have the opportunity to protect their children from diphtheria. Two doses of toxoid given by a competent physician at the proper age one week apart will immunize and protect 99 out of every 100 children from diphtheria.

* * * *

One of our nurses working in a county which has a newly organized health department reports a most interesting and significant item. The county is one of the best in the State, has a fine intelligent population, evenly balanced between industry and agriculture, it is a Piedmont county, and as a county in which to live in freedom from many of the difficulties of life it is one of the best.

This nurse had inspected the children in a large consolidated school. After finishing her routine duties and arranging as far as possible for children who need corrective efforts to have the care of physicians, surgeons, dentists, etc., she was meeting with the faculty for a general discussion of the health needs of the school, etc. She had noted that the school had an unusually clean system of toilets, that so far as the janitor requirements were concerned, the whole building and grounds were kept in a perfectly satisfactory manner. All the toilets were spotlessly clean and in order, there were no offensive odors around the building or the grounds. In short, he was a hundred per cent perfect janitor. The nurse remarked about this in the faculty discussion, and incidentally inquired if the principal and the teachers received regularly and read the *Health Bulletin*. The principal spoke up and said no, they did not get it. They had never written and requested it to be sent, but

that the janitor had been receiving it for several years, and what is more, that he read it. So the nurse had the explanation right there of the excellent sanitary conditions of the school. We mention this because we have consistently held in these columns that the sanitation of a school and the degree of satisfaction with which the janitor performs his services is largely dependent on the principal and the principal's desire for a clean school. This case, however, proves the exception to the rule. We hope that the principal and the teachers will become interested through the practical example in health education set by the janitor. We would like to know how many other schools have janitors who have been blazing the health education trail in this State without the example of the principal.

* * * *

In his Narrative Report made to the State Board of Health for the month of July, one health officer makes the following significant statement concerning the presence of a venereal disease which is by way of being somewhat overlooked at present in the insistence on attention to the control of another dangerous venereal disease. The statement may as well be published anonymously, and is as follows:

"One case of gonorrheal ophthalmia was reported, a colored child two years old. Hospitalization was refused, but the family physician states that the child has improved. The health officer and nurse for this district visited the home and gave detailed instructions to the mother and father, as to necessary precautions to prevent the spread of the disease to an infant and other members of the family. On the urgent advice of the health officer the father carried his wife and all the other people in the home to his doctor for examination. This examination proved that the mother had gonorrhea, and she is now under treatment."

* * * *

In a paper presented at the Health Officers' Conference, held in Raleigh on November 28th, Dr. S. B. McPheeters, of Goldsboro, presented a summary of the maternity and infancy work now going on in that county and in many other places in the State. Among the significant statements of Dr. McPheeters was the following:

"About five hundred mothers die needlessly in child-bearing in North Carolina annually. Of this number, more than 90 per cent have had no prenatal care, for the simple reason that women do not know of the need of such care. The number to die is not marked. It is necessary to examine between seventy-five and eighty thousand pregnant women in North Carolina in order to reach the five hundred who die and to save at least half of them from death. That is the problem in a nutshell. Naturally, about two-thirds of these women have the services of physicians, but no one knows to what extent the physicians rigidly carry out through the nine months of pregnancy the requirements for thorough examination and oversight. Education is the first step and the most important one. We must reach mothers and fathers, also potential mothers and fathers with the important fact that motherhood can and must be made safe. I see no other way than for it to be taught in the schools as part of the high school curriculum. The discussion is a continuous one and probably will never be finished. Plans and preparations should be made now to handle the problem continuously for all time. Public opinion will soon demand more nurses in the public health field and more adequate care for all people unable to purchase such care individually."

Tularemia Still Present in State

With the opening of the rabbit season in North Carolina, Dr. Carl V. Reynolds, State Health Officer, recently called attention to the danger of tularemia, commonly known as "rabbit fever," and cited precautions which should be taken to prevent the spread of this disease, which causes the patient to become painfully ill and often results in death:

"When you are cleaning and oiling up that old gun to go rabbit hunting—and when you call the dogs to go along with you—remember there are other dangers besides getting accidentally shot," Dr. Reynolds admonished. "If you should, through carelessness, contract tularemia, or 'rabbit fever,' you will wish that you had never seen a molly cotton-tail and hope never to lay eyes on one again—if you survive.

"But there are precautions which will give you reasonable protection," he assured, and urged that these be borne in mind until the season, which opened Thanksgiving Day, closes February 15th.

How Tularemia Spreads

"In tularemia, we have another disease which is spread through the bite of the pestiferous tick," the Health Officer said. "It may also be transmitted by certain kinds of flies. It attacks wild rabbits, particularly. Domestic rabbits are, as a rule, free from it, due to the fact that they are not exposed to these sources of infection.

"Human beings contract tularemia by either handling, skinning or cutting up the raw meat of infected animals, infection being transmitted through an open cut, a scratch or an abrasion of the skin. Even the merest scratch may let enough poison in to infect the system and cause the patient to come down with tularemia. Severe cases have occurred through rubbing the infectious material into the eyes while preparing the meat for cooking.

"Hence, it may be readily realized that the hunter is not the only one who should exercise caution. The health of his wife may be endangered, or that of his child, if he or she is the one who skins or cooks the rabbit—or even the hired girl may be jeopardized.

Some Simple Rules

"Here are some simple rules for the prevention of tularemia infection:

"Use rubber gloves—don't handle rabbits with your bare hands. If it is impossible to secure rubber gloves, then have plenty of soap and water handy and wash your hands with these immediately after skinning a rabbit or cutting up raw rabbit meat. It is important to keep your hands from your eyes and face.

"Do not allow rabbit fur to come into contact with any scratch, open wound or abrasion. Burn all papers or other wrappings used in the transportation of the game.

"Give the 'left hind leg of the graveyard rabbit' to your child as a charm, just like you would give him a buckeye—but be sure not to do so until the rabbit foot has thoroughly dried out or been sterilized.

"If you buy your rabbit meat and do not secure it by hunting yourself, then let someone who is thoroughly equipped to do so, cautiously and expertly, skin your rabbits.

"Cook rabbit meat thoroughly—you may be encouraged to know that this will always destroy tularemia germs. So don't stop enjoying rabbit meat as a delicacy or the sport that brings it to your table, but use common sense."

Good Tonic

By ISABELLE BADDOUR, in *Goldsboro Herald*

IF, on any third Thursday, you feel particularly sorry for yourself and feel that the world owes you a little more than you are being allotted, visit the clinic held in Goldsboro by the North Carolina Orthopaedic Hospital.

There you will see dauntless courage, figuratively thumbing its nose at despair; worried parents placing their every hope in the hands of those miracle men—the clinic doctors and their sympathetic, capable staff of nurses—those who never hope to be

exactly like "other folks," but ever cheerful, thankful for any improvement which will change them from a twisted, painful mass of humanity to at least the point where they can see a little more than their painful hole in this beautiful universe.

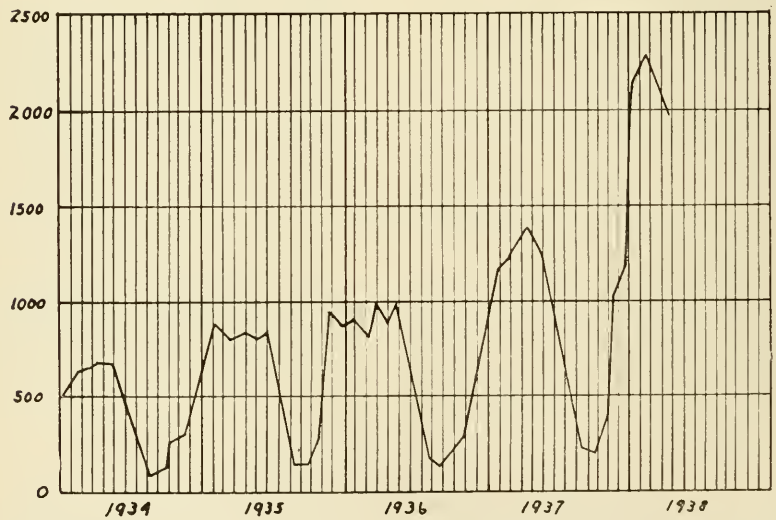
There white-coated men with sure, skilled hands are robbing infantile paralysis, spinal diseases, club feet and countless other torments of the human body and mind, of their greedy toll.

To a mere observer the scene is heart-rending and depressing, but to those of the inner circle there is the recompense of the tiniest improvement, the thrill of seeing those shapeless forms grow straight, the unalloyed delight of children who have never known what it was to take a step, walk out, made better men and women for having won their long, bitter battle. The observer hears that some have been in the cumbersome casts for six, ten, twelve years and thinks, "How do the poor things survive the arduous waiting?" Little do they know of the pathetic thought of "some day when I get well" is incentive to indomitable faith that cannot be shaken by time.

So, think how inane it is to fret over our petty headaches, colds and other foibles of civilization, and remember the saying of the wise man, "I complained because I had no shoes until I met a man who had no feet."

SMALLPOX CASES IN THE UNITED STATES

By Individual Four-Week Periods
1934 – 1938



"Eternal vigilance is the price of health and Tar Heels should take warning from the story revealed by the graph above," Dr. Carl V. Reynolds, State Health Officer, said recently. He declared that "It is very easy to become careless in the employment of preventive methods, and I am afraid the fact that the incidence of smallpox in the United States has made a progressive yearly increase for sometime is an example of such carelessness. It is at least an indication," he continued, "that people are neglecting safety through vaccination. Through such neglect, we may well expect at any time a virulent germ to attack the unprotected community, resulting in a real epidemic of smallpox, which, although it is a readily controllable disease, cannot be kept under control without constant, well-directed efforts to insure vaccination, of people not already immune."

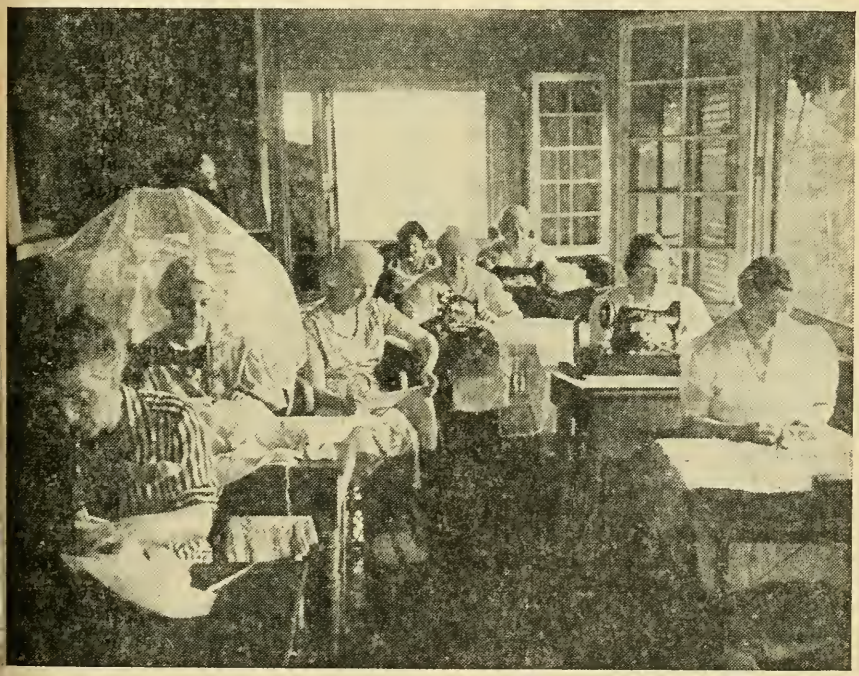
The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

This Bulletin will be sent free to any citizen of the State upon request

Entered as second-class matter at Postoffice at Raleigh, N. C., under Act of July 16, 1894. Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

Vol. 54 FEBRUARY, 1939 No. 2



SHOWING THAT "IT CAN BE DONE"

Members of the Maternity Welfare Committee of Pinebluff, sewing for indigent mothers and babies of Moore County. This fine energetic group made and fitted up eighty-five bassinets and as many layettes last year. In addition, they raised more than $500.00 for the support of the maternity and infancy work of Moore County. Mrs. Walter MacNeille, third from left, is Chairman. Note the bassinet in background to left.

THE Health Bulletin

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Statewide Conference on Better Care for Mothers and Babies

ON February 15th, there will be held in Raleigh a Statewide Conference on the above subject. This conference is sponsored by the State Board of Health and by the National Council for Mothers and Babies, with headquarters at Washington, D. C.

This is the first statewide conference promoted by the National Committee since its organization last summer. The purpose is to bring together in a one-day meeting, with morning, afternoon and evening sessions, a group of people representing many of the professional and lay organizations in North Carolina interested in better care for our mothers and our babies. Dr. Aldert S. Root, of Raleigh, who has for several years been Chairman of the North Carolina Section of the American Academy of Pediatrics, is Chairman. Dr. Root has been a baby specialist in Raleigh for more than thirty years. He has always been a supporter of public health work and has done a great deal in his private practice, as well as in his public activities, to make safer the first year of life for every baby in this section.

We are publishing on another page of this issue the full program. It will be noted that the morning, afternoon and evening sessions will be rich in human interest for practically every group of people in the State. It is expected that much valuable information will be presented at this conference, which should go a long way toward crystallizing public support all over the State for bettering conditions where such betterment is needed.

Dr. Martha M. Eliot and Dr. Edwin F. Daily, of the United States Children's Bureau at Washington, have consented to attend the conference and appear on the program. Dr. Fred L. Adair, one of the world's foremost obstetricians, has also consented to attend the conference and make a speech at the evening meeting. No less interesting to those who attend the conference will be the description of activities now being carried on in many sections of the State. Competent and interesting people will present these subjects from every angle.

In connection with the conference, we may say at this time that the maternal death rate in North Carolina for the year 1938 is the lowest in the history of the State, showing that progress is being made in the right direction. The infant death rate is still entirely too high. This may be expected so long as 25 per cent or more of the women in this State who have babies are attended only by midwives, and so long as another 15 per cent have the attention of physicians only at the time of confinement. There are some sections of the State where midwife work is now practically unknown and where competent physicians ad-

vise and attend the mothers. There is no place in the State, however, at this time where medical and nursing service is sufficiently provided for all of the babies during the first year of life and where instruction, particularly in feeding and general care of babies, is utilized as it should be.

Mrs. Gordon Wagenet, Executive Secretary of the National Council for Mothers and Babies at Washington, has greatly aided in working out the practical plans for this conference. Dr. Jane S. McKimmon, of the State College Extension Service, known to everybody in the State, and Professor George H. Lawrence, of the Sociology Department of the University of North Carolina, have assisted materially in preparing plans for the conference. Dr. T. W. M. Long, Secretary of the North Carolina State Medical Society, Dr. Fred Hale, President of the State Dental Society, and Dr. F. Bayard Carter, of the Duke University Medical School, have also assisted in the preliminary studies and preparation for the conference. At a meeting in Raleigh on November 4th of the Advisory Committee of the State Board of Health Maternal and Child Health Division, unanimous endorsement of the proposed plans for the conference was adopted.

It is hoped and expected that every county and city health department in the State, together with all other interested organizations, may be fully represented at the conference.

A Progress Report for 1938

By CARL V. REYNOLDS, M. D., North Carolina State Health Officer

THE year 1938 has been marked by many valuable and permanent contributions to the cause of public health in North Carolina. A responsive public mind, encouraged by a cooperative press, has played a large part in maintaining a splendid morale among health workers, building up among them an incentive which undoubtedly will be reflected in the 1939 program.

Collectively and individually, the various State divisions and county and city health organizations that carry on North Carolina's health program have worked with unanimity of purpose to accomplish definitive objectives. In performing this great responsibility, they have had the active support, advice and encouragement of the members of the State Board of Health, who shape the health policies of North Carolina.

The physical development of the State Health Department has been one of the outstanding accomplishments of the year. Work is well under way toward the equipment of a farm to be used as a part of the State Laboratory of Hygiene, six miles west of Raleigh, on United States Highway No. 1, where the farm laboratory and barns are being erected at a cost of $40,737. This will be a part of the new $290,000 outlay for a central laboratory, in Caswell Square, in Raleigh, for which the contract for excavation was recently let. This unit will be adjacent to the present State Board of Health building.

This new physical development will more than double the present facilities of the State Laboratory of Hygiene and will make available, on a basis of self-sustenance, vaccines and serums at an annual saving to the people of North Carolina considerably in excess of the present $2,500,000 to $3,000,000. New biological products

will be added, including serums for protection against measles, whooping cough and possibly scarlet fever. In addition to this, it is hoped to be able to produce anti-pneumonia serum for use by the indigent, considerably below present costs. When this is accomplished, it will mean the saving of 1,500 lives from an untimely death annually in North Carolina.

One of the 1938 accomplishments which is expected to have a far-reaching effect during the coming year is the arrangement for an extensive cooperative program, to be carried on by the State Board of Education and the State Board of Health. Information has been received to the effect that the International Health Division of the Rockefeller Foundation and the General Education Board have approved and made appropriations for a health education and school service program, looking toward the integration of the facilities of the educational and health departments to reach North Carolina's approximately 900,000 public school students, through the 24,000 teachers and the State's health personnel, in an effort to get these students, during the habit-forming period of their lives, to develop health habits.

This unified health service will include health education, physical education, mental hygiene, nutrition, public health supervision and related subjects, the money from the Rockefeller Foundation and the General Education Board to be supplemented by State funds. It will be under the jurisdiction of the State Superintendent of Public Instruction and the State Health Officer. The coordination committee, which has held its initial meeting, is composed of Dr. G. M. Cooper, Assistant State Health Officer and Director of the Division of Preventive Medicine, State Board of Health; Dr. J. Henry Highsmith, Director of Instructional Service, State Department of Public Instruction; Dr. Oliver K. Cornwell, Director of Physical Education, University of North Carolina; Dr. R. J. Slay, Professor of Science, East Carolina Teachers' College, Greenville, and Dr. C. F. Strosnider, Goldsboro.

In this connection, it might be stated that during the spring of 1938, thirty-four health institutes were held throughout North Carolina by the State Department of Public Instruction, the State College Extension Service and the State Board of Health, in a cooperative program that reached a total of 7,880 public school teachers. This is another instance of cooperation between State agencies dedicated to human betterment.

One of North Carolina's outstanding accomplishments during 1938 has been its successful fight on syphilis, which disease, formerly mentioned only in a whisper, when at all, has been brought out into the open, where it is being attacked systematically and intelligently. The syphilis control work of the State Board of Health is carried on as an activity of the Division of Epidemiology. So widespread has been the publicity and so thorough the cooperation between the press and health authorities, and between doctors and clinicians in making reports, that in September of this year, North Carolina reported 5,749 cases, leading every other State in the Union in this respect; New York, with a population of around 13,000,000, trailing, with only 5,283 cases reported.

By means of the Reynolds Fund, twenty-one counties, with full-time health service, that matched funds on a fifty-fifty basis, are demonstrating what could be done in all of North Carolina's one hundred counties with an adequate anti-syphilis program. Federal funds coming into North Carolina as a result of the

passage of the LaFollette-Bulwinkle Bill, are used in counties on an inadequate basis, but which will become adequate at the end of the fourth year.

Since the launching of the anti-syphilis drive in North Carolina, the number of Wassermann Tests run through the State Laboratory of Hygiene was increased from 120,000 a year to 250,000, with new cases being reported at a rapidly increasing rate.

There have been many other activities of the State Board of Health which have helped to make 1938 an outstanding year. It is interesting to note, for example, that during this year twelve full-time local health units have been established. North Carolina now has seventy-six counties with such full-time health service, serving more than 85 per cent of the State's approximately 3,500,000 people. The benefits of this service are far-reaching, insuring those who enjoy it protection which can come through no other channel. One of the chief objectives of the State Board of Health is to see every one of the one hundred counties within the scope of this protection.

During the year, the Division of Industrial Hygiene, which is conducted cooperatively by the North Carolina Industrial Commission and the State Board of Health, has made approximately 2,000 examinations for occupational diseases which result from exposure to siliceous dusts. Workers found to have contracted tuberculosis, silicosis or asbestosis are referred to physicians, in order that they may be cured or placed in less hazardous occupations. This is a reclamatory service. In most instances, were it not for these examinations, a worker would not know of his condition until it was too late to remedy it.

Much has been accomplished in 1938 in the field of preventive medicine, which forms an integral part of public health work. Through its Division of Preventive Medicine, directed by the Assistant State Health Officer, the Board of Health has established prenatal centers in forty-three counties for indigent women. Free well baby centers also have been set up.

During the current year, 238 different physicians have aided in the examination of these people. Not less than 15,000 babies and more than 13,000 women have been given attention.

This work has been organized by the Maternal and Child Health Service of the North Carolina State Board of Health, which has been aided financially through funds provided by both the State and Federal Governments.

The Division of Preventive Medicine also supervises the State's service for crippled children, of whom there have been 5,322 clinic examinations during 1938, while the total number receiving hospital care during the year was 941. Eighteen monthly clinics are held, the services of eleven qualified orthopedic surgeons are available, and children are sent to twenty general hospitals throughout the State.

Through this service to its crippled children, North Carolina removes their handicaps and places them in a position to become useful citizens, where otherwise they might grow up to remain unable to earn a livelihood.

The year has seen a material enlargement of the malaria control campaign, carried on by a corps of trained workers. "Spot maps" are being made and blood surveys taken in various counties where the campaign has been intensified. More than 10,000 blood slides were made in a single county. The campaign has been marked by the construction of 704 miles of ditches and canals, while 391 miles

of those already constructed were cleaned out, through cooperation with the Works Progress Administration. This drained 13,000 acres of mosquito-breeding ponds and swamps.

This activity is materially reducing the morbidity and mortality rates from malaria.

During 1938 the State Board of Health, in cooperation with the Works Progress Administration and the United States Public Health Service, has brought about the construction of 35,423 modern sanitary privies for rural families in North Carolina, thus providing them with protection against typhoid fever, dysentery, diarrhea, hookworm and other intestinal diseases which result from insanitary conditions.

Through its Division of Oral Hygiene, the Board of Health has, during the current year, extended its services to thousands of North Carolina school children by providing them with examinations and referring them to their family dentists, at the same time providing corrective measures for the indigent. The Sanitary Division has extended its inspectional and other services designed to promote better sanitation among eating places, dairies and so forth, and to guarantee the people pure drinking water and clean food.

The Division of Epidemiology, which keeps a daily record of all reportable diseases in North Carolina, including contagious and infectious ailments, maintains a series of "health thermometers," which give a constant picture of conditions and show how the current incidence of reportable maladies compares with the average on a monthly and yearly basis.

Records of all births and deaths are kept up to date by the Division of Vital Statistics, which this year was termed "one of the most up-to-date in the United States" by a representative of the Federal Bureau of the Census.

All the various activities of the State Board of Health are portrayed in a "visual education" exhibit which has been permanently installed in the halls of the Health Building in Raleigh. An invitation to visit this exhibit, as well as the various divisions of the State Board of Health, is hereby extended to every citizen of and sojourner in North Carolina.

Citizens' Groups Prove Helpful in Saving Lives of Mothers and Babies

By MRS. J. HENRY HIGHSMITH, Assistant Director Health Education

THAT lay groups are becoming interested in the problem of making motherhood and babyhood safe in their communities and are doing something about it, indicates that real progress is now being made in this important field of health work. It means that the public attitude is changing in regard to whose responsibility it is to prevent mothers losing their lives at childbirth and babies dying the first few days or weeks of life. We are encouraged to think that the people now realize that while the doctors, nurses, hospitals and clinics still have the major responsibility for saving mothers and babies, that the people themselves are not without their share of the responsibility; that the job requires both the lay and professional groups working hand-in-glove together. One group working alone has not been able to improve the situation to any great extent, but

all working together have proved that the job can be done surprisingly well.

One of these citizens' groups whose activities are particularly noteworthy is the Maternity Welfare Committee of Pinebluff. Under the chairmanship of Mrs. Walter MacNeille, this committee, composed of eighteen or twenty energetic, kind-hearted women of the village community, supports the maternity and infancy work of Moore County in numerous ways. In addition to raising a sum of from three to five hundred dollars annually to be used in purchasing food, clothes, medicine and doctor's care for the neediest patients, they look up and transport needy patients to the hospital and clinics, they follow up and investigate referred cases, assist at local clinics and provide work for men and women who are able to repay for some service rendered them or their families. Funds are raised through donations of cash, donations of articles to sell or material to be converted into clothes, layettes or bassinets; through the Good-will Shop which sells second-hand articles from clothes, furs and jewelry to andirons and pokers; and through commissions on the sale of certain articles and services.

A special activity of this committee is sewing, making garments for the poor. The members meet one afternoon each week at the home of the chairman, who has converted her sleeping porch into a well-equipped sewing room. Here they make layettes and bassinets with all their fittings for the needy. The group made eighty-five bassinets last year, whose cost and that of their fittings averaged $5.00 each. The services and cooperative efforts of this fine group of citizens is beyond calculation in its relation to reducing the sickness and suffering of mothers and babies in Moore County.

Another citizens' group that has pointed the way of service, especially for younger women, is the Junior Guild of Rocky Mount. This group of fine, intelligent young matrons and girls responded to the call of the city health officer for volunteer work and funds in behalf of the indigent mothers and needy babies of Rocky Mount. Forty or more enlisted for service and organized themselves into the Junior Guild, an organization patterned along the lines of Junior Leagues of larger cities. They took for their objective the challenge to reduce infant mortality in their community. A plan was adopted whereby each underprivileged baby was made the responsibility of two of the members, who were required to visit the child once a week, provide cod liver oil, milk, clothing, or other supplies which the family could not afford for the baby, and furnish transportation for the mother and child to the maternity and infancy center on the days it was held. The Guild has had under its care throughout the year between forty and fifty babies, and incidentally, their mothers. The babies' health and welfare are supervised through infancy and early childhood and often through the preschool years. The members work in close cooperation with the physicians, city health department, the public welfare workers and other local agencies.

A recent visit by the writer to the Junior Guild headquarters found the members busy and enthusiastic about what they were able to do and contemplated doing in the future. They admitted that they had less time for bridge, parties and movies, but that they found a satisfaction in service which more than repaid them.

The Ahoskie Woman's Club illustrates what a club or similar organization can do to meet a local need. Two years ago this group of earnest women sponsored the establishment of a Maternity and Infancy Center in

the town of Ahoskie, where indigent mothers come and get medical advice for themselves and their babies free. The center which they have provided and equipped is on the ground-floor, is easily reached, and has separate waiting rooms for white and colored patients, a private examining room, physician's private office, nurses' room and toilets. The county health officer and one or more nurses have charge. The center serves thirty or forty needy mothers and as many babies twice a month. One of the local citizens said, in speaking of what the center has meant to the community, "I can't say all that it has meant, but I would hate to think of the suffering mothers and babies we would have without it."

Health Services for Crippled Children

By JAMES T. BARNES, State Supervisor Crippled Children's Service
North Carolina State Board of Health

HELEN KELLER once expressed this observation: "It is good to give the unfortunate a living; it is still better to raise them to a LIFE worth living." North Carolina recognizes this fundamental fact and has progressively developed services for crippled children which enable this group of unfortunates to rise from "infirmity" and to attain personal "happiness" and "usefulness" in society. The ideal had its inception in this State more than a score of years ago when the Orthopaedic Hospital for Crippled Children was established and has been manifested by stages of developments through the years culminating in the coordinated plan of service directed by the State Board of Health initiated on April 6, 1936, and projected through the intervening period. In this service we are dealing with two groups of physically handicapped children under the age level of twenty-one years, those with: (1) orthopedic affections, caused by congenital or acquired defects of development, disease, or injury, which prevent the complete use of the body or limbs, and (2) plastic affections, caused by congenital or acquired defects of development, disease or injury; for example, harelip, cleft palate, and severe and destructive burn injuries, which may or may not affect function, but none the less prohibit or limit the physical and social attainment of the child. In establishing a service, limited to the medical aspects of the problem, the State had to consider (1) the need, (2) existing facilities, and (3) further development of services, within financial limitations, to meet the needs of crippled children.

In studying the need it was found that there was no conclusive data as to the extent of the problem. Much had been done for cripples over the years, but these activities had been so poorly coordinated that there were insufficient records to indicate the number and certainly not the needs of the cripples in the State. An advisory committee was formed representing the various independent, local and State agencies interested in crippled children, and from all these sources information was secured. This information indicated that there were upward of 6,000 classified cripples under twenty-one years of age and that an estimated 1,200 were in need of immediate treatment. It was indicated that on the basis of Federal estimates there were as many as 20,000 persons within the State who would qualify as crippled children.

A study of existing facilities and services was undertaken. It was

found that the State Orthopaedic Hospital had a bed capacity for the care of 150 children, with an annual turnover of approximately 450 children. It directed weekly out-patient and clinic services at the hospital and a similar service monthly at Goldsboro, N. C., 250 miles east from the Hospital. The Hospital had a waiting list upward of 300 children requiring bed care, and records showed that current clinic intake of this type of child would more than equal the available beds from time to time. Relatively few children were being cared for in general hospitals because there were no State or local funds earmarked for such purpose. Likewise a relatively small number were being financed by private groups and individuals in general hospitals. Only one general hospital provided free bed care to a small number of cripples.

Eleven monthly clinics sponsored by local civic agencies and inadequately supervised by the State Department of Vocational Rehabilitation served to treat scattered cases of cripples with mild conditions and for post-hospital supervision, but these were, also, inadequately organized, financed and staffed. No system of follow-up existed. Health and welfare agencies in the counties made spasmodic efforts in this direction, but as these agencies were non-existent in some of the counties and inadequately organized, staffed and financed, in others, follow-up was not effective for the State as a whole.

With this information in hand, the advisory committee recommended that a bureau be set up to register cripples, to coordinate the several services into a well-defined and functioning plan and to administer Federal funds granted to the State for the purpose of expanding and extending crippled children's services, especially in the rural areas and in sections of economic distress. This recommendation resulted in the creation of the Division for Crippled Children in the State Board of Health, medically directed by a physician and administered by a social worker experienced in the administration of social services. Definite objectives for the enterprise were set, and while these goals have not been fully attained, primarily because of financial limitations, considerable progress has been made. The following objectives were set in 1936: (1) to locate crippled children and register them at the State Board of Health; (2) to provide expert and specialized services for examination, diagnosis and treatment through clinics; (3) to provide hospital care and treatment at the State Orthopaedic Hospital and at selected general hospitals; (4) to follow crippled children in their homes through a field service of personnel, trained especially in the care and treatment of crippled children, and (5) to collect data, publish statistics and otherwise disseminate information engendering public interest in the problem.

PROGRESS

Following the establishment of the crippled children's service in the State Board of Health, registrations were made from all known sources. The following table is given of classification of those admitted to the register as of June 30, 1938. These represent classifications recorded by the cooperating orthopaedic surgeons:

TABLE I
REGISTER OF CRIPPLED CHILDREN BY SEX, RACE, AGE AND DIAGNOSIS

A—Number of Children, According to Sex and Diagnosis

SEX	Total	Orthopaedic or Plastic Conditions	Other Crippling Conditions	No Diagnosis Made by Licensed Physician
Total	14,265	13,535	545	185
Boys	7,982	7,620	269	93
Girls	6,247	5,886	274	87
Sex unknown	36	29	2	5

B—Number of Children, According to Race and Diagnosis

RACE	Total	Orthopaedic or Plastic Conditions	Other Crippling Conditions	No Diagnosis Made by Licensed Physician
Total	14,265	13,535	545	185
White	11,541	10,971	437	133
Negro	2,311	2,205	85	21
Other	123	112	10	1
Race unknown	290	247	13	30

C—Number of Children, According to Age and Diagnosis

AGE GROUP	Total	Orthopaedic or Plastic Conditions	Other Crippling Conditions	No Diagnosis Made by Licensed Physician
Total	14,265	13,535	545	185
Under 1 year	75	74	1	0
1 year, under 5	1,337	1,253	72	12
5 years, under 10	2,719	2,572	113	34
10 years, under 15	3,979	3,796	150	33
15 years, under 20	3,989	3,783	155	51
20 years, under 21	1,744	1,678	46	20
Age unknown	422	379	8	35

TREATMENT

There are two interrelated methods by which treatment is provided: (1) through well organized and regular clinics conducted by recognized specialists in the field, located at strategic centers throughout the State and accessible to all citizens; (2) eighteen selected general hospitals, and (3) the North Carolina Orthopaedic Hospital (report of the latter is excluded from the statistics considered in this report). Attached is a schedule of the clinics. It should be pointed out that, while these clinics are primarily for children under twenty-one years of age, persons with crippling defects more than twenty-one years of age are admitted for diagnostic services and, therefore, will be reported with the distinction "adults."

On July 1, 1936, supervision of the eleven clinics previously supervised by the Rehabilitation Department were transferred to the Division for Crippled Children, which reorganized them on a more adequate basis as to records, personnel and supervision. Five other clinics have been established on the same basis and the sixteen clinics conducted by ten qualified orthopaedic surgeons provide largely for the diagnostic services provided in the State Plan. Table II shows the schedule of these clinics, while Table III indicates the accomplishments for the two-year period ended June 30, 1938.

TABLE II

SCHEDULE OF CLINICS

LOCATION OF CLINIC	No. Session Schedule	Surgeon in Charge	Collaborating Agencies	Financial Sponsorship
Asheville	14 4th Saturday A.M.	John T. Saunders, M.D.		Rotary Club
Bryson City	15 3rd Saturday A.M.	John T. Saunders, M.D.	Co. Health Dept.	Rotary Club
Charlotte	11 1st Saturday A.M.	Alonzo Myers, M.D.	Co. Health and Welfare Depts.	Rotary Club
Elizabeth City	1 4th Tuesday A.M.	R. B. Raney, M.D., and Internes		American Legion
Fayetteville	7 3rd Friday P.M.	H. A. Thompson, M.D.	Co. Health Dept.	Kiwanis Club
Greensboro	18 4th Wednesday A.M.	W. F. Cole, M.D.	City Health Dept.	Crippled Children's Comm.
Greenville	16 1st Friday P.M.	H. A. Thompson, M.D.	Co. Health Dept.	Rotary Club
Henderson	20 3rd Wednesday P.M.	W. F. Cole, M.D.	Co. Health and Welfare	Kiwanis Club
Lenoir	13 3rd Thursday A.M.	J. S. Gaul, M.D.	Co. Health and Welfare	Kiwanis Club
Lumberton	19 1st Friday A.M.	O. L. Miller, M.D., and L. D. Baker, M.D.	Co. Health and Welfare	Various Agencies
Mt. Airy	9 4th Friday A.M.	R. A. Moore, M.D.	Co. Health Dept.	Kiwanis Club
Salisbury	17 2nd Friday P.M.	O. L. Miller, M.D.	Co. Health Dept.	Kiwanis Club
Tarboro	3 Monday before last Tuesday A.M.	R. B. Raney, M.D., and Internes	Co. Health and Welfare	Rotary Club
Wilmington	6 Last Saturday A.M.	Alonzo Myers, M.D.	Walker Hospital	Rotary Club
Wilson	4 2nd Friday P.M.	H. A. Thompson, M.D.	Co. Health and Welfare	Co. Health Dept.
Winston-Salem	10 2nd Saturday A.M.	R. A. Moore, M.D.	Co. Health Dept.	Kiwanis Club
Gastonia*	12 Each Tuesday P.M.	W. M. Roberts, M.D., and Internes		State
Goldsboro*	5 3rd Thursday A.M.	W. M. Roberts, M.D. and Internes		State

*-Clinic statistics not included in Table III.

TABLE III

Clinic Activities*

1.	Number of clinic sessions conducted	377
2.	Number new cases children admitted and examined	4,545
3.	Number old cases children admitted and examined	5,423
4.	Number examinations of children (2 plus 3)	9,968
5.	Number casts (applied or adjusted)	1,017
6.	Number braces (advised, measured, fitted or adjusted)	350
7.	Number dressings (applied or removed)	1,519
8.	Number bandage (proprietary) or strapping (advised or applied)	279
9.	Number corrective shoes (advised, applied or adjusted)	627
10.	Number corrective exercises or massages (advised or directed)	706
11.	Number dietetic treatment (advised or directed)	326
12.	Number new cases adults admitted and examined	1,422
13.	Number old cases adults admitted and re-examined	1,105
14.	Number examinations adults (12 plus 13)	2,527
	Grand Total Examinations (4 plus 14)	12,495

*-Statistics for Gastonia and Goldsboro Clinics excluded.

The greater need in 1936 was for additional hospital services to supplement the work of the State Orthopaedic Hospital. It was found that there were twenty general hospitals with qualified orthopaedic surgeons on the staff. These had satisfactory facilities for the care of crippled children and were selected on this basis for per diem care of children committed on written authority of the State Agency. A satisfactory agreement as to rates and service was made with these hospitals, which have provided an average of more than fifty beds daily, with an available capacity double this number. Care rendered by these hospitals, all in all, has proved very satisfactory. Facilities for the special care of crippled children in these hospitals have steadily improved. The following table indicates services rendered for the biennium ended June 30, 1938:

TABLE IV

Hospitalization*

1.	Number children authorized for admission to general hospitals	1,591
2.	Number children admitted to general hospitals	1,502
3.	Number children extension authorizations (involves 368 re-admissions)	641
4.	Number children discharged general hospitals	1,622
5.	Number days' care rendered	39,188
6.	Number average days' care per discharge	24.2
7.	Number average cost care and treatment	$97.50

Boarding Home Care

1.	Number children admitted to boarding homes from hospitals	3
2.	Number children discharged from boarding homes	1

Appliances

1.	Number of appliances purchased	197
2.	Average cost of appliance	$27.00

*–Statistics for State Orthopaedic Hospital excluded.

FOLLOW-UP

As proposed in our "objectives" at the outset of the organization, the State Agency has functioned in a vital way to the needs of children through the follow-up services. We undertake to set forth evidence of the effectiveness of this feature of our plan. We have cause to take pride in these achievements. While the tangible results may not be apparent to one considering this report, we have unmistakable evidence that the follow-up service is vital to the promotion of all features of the service, and, indeed, serves as the greatest conserving element of the other services. We need to expand in personnel in respect to the follow-up which would effect a better coordination of local personnel in this important feature of crippled children's work.

TABLE V

FIELD SERVICE

1—Office

a.	Number State staff conferences	53
b.	Number conferences with surgeons	577
c.	Number conferences with health officials	895
d.	Number conferences with welfare officials	954
e.	Number conferences with official bodies	10
f.	Number conferences with non-official bodies	13
g.	Number other conferences	1,716
h.	Number talks	32
i.	Number in attendance	1,471

2—Clinic

a.	Number clinic attendances by State staff	494
b.	Number patients contacted (present at examination)	14,074
c.	Number instructions to patients	3,673

3—Field

a.	Number investigating visits	1,066
b.	Number new cases located	445
c.	Number home visits to new cases	680
d.	Number home visits to old cases	2,191
e.	Number new cases referred to clinic or surgeon	617
f.	Number old cases referred to clinic or surgeon	1,558
g.	Number not home visits	372
h.	Number appliances adjusted	89
i.	Number exercises (given or instructed)	429
j.	Number therapies (given or instructed)	193
k.	Number cases referred to Vocational Rehabilitation	495

In concluding, may we assert that the crippled children's services of North Carolina are in step with the conclusions reached at the 1930 White House Conference on Child Health and Protection, quoted as follows: "If we want civilization to march forward, it will march on the feet of healthy children, but beside them, shoulder to shoulder, must go those others—children we have called "handicapped"—the lame, the blind, the deaf and those sick in body and mind. All of these children are ready to be enlisted in this moving army, ready to make their contribution to human progress; to bring what they have of intelligence, of capacity, of spiritual beauty. American civilization can not spare them."

MATERNAL MORTALITY IN NORTH CAROLINA
By Cause, By Race, 1933-1937, Inclusive

CAUSE OF DEATH	1933		1934		1935		1936		1937		1933-1937, inc.		
	White	Colored	White	Colored	White	Colored	White	Colored	White	Colored	White	Colored	Total
Abortion with septic conditions	18	11	27	14	27	29	21	23	9	16	102	93	195
Abortion without mention of septic condition	22	15	15	10	19	13	10	10	14	12	80	60	140
Ectopic gestation	4	7	5	9	4	7	5	5	2	3	20	31	51
Other accidents of pregnancy (not to include hemorrhage)	13	5	17	8	22	5	22	6	11	7	85	31	116
Puerperal hemorrhage	35	20	48	30	35	22	38	20	28	27	184	119	303
Puerperal septicemia	51	38	67	51	44	39	43	38	32	29	237	195	432
Puerperal albuminuria and eclampsia	104	71	105	76	81	66	79	67	63	55	432	335	767
Other toxemias of pregnancy	16	17	27	12	24	19	23	18	26	20	116	86	202
Puerperal phlegmasia albadolens, embolus, sudden death (not septic)	13	4	15	7	23	13	23	12	13	9	87	45	132
Other accidents of labor	38	26	37	26	39	28	46	26	34	35	194	141	335
Other and unspecified conditions of the puerperal state	5	2	0	0	0	0	0	0	0	0	5	2	7
Totals	319	216	363	243	318	241	310	225	232	213	1,542	1,138	2,680

MATERNAL MORTALITY PER 1,000 LIVE BIRTHS

	1933		1934		1935		1936		1937		1933-1937, inc.		
	White	Colored	White	Colored	White	Colored	White	Colored	White	Colored	White	Colored	Total
Number of Births	51,490	23,265	54,438	24,423	54,199	24,642	52,408	23,218	53,857	25,387	266,392	120,935	387,327
Rate per 1,000 Live Births											5.8	9.4	6.9

TOTAL NUMBER BIRTHS AND DEATHS UNDER ONE YEAR OF AGE (Exclusive of Stillbirths) AND MATERNAL DEATHS IN EACH COUNTY, WITH RATE PER 1,000 LIVE BIRTHS, 1937

	Infant Mortality				Maternal Mortality				Total Births	
	Place of Death		Place of Residence		Place of Death		Place of Residence		By Place of Birth	By Place of Residence
	No.	Rate	No.	Rate	No.	Rate	No.	Rate		
Entire State	5,164	65.2	5,157	65.2	445	5.6	445	5.6	79,244	79,120
Alamance	55	51.7	66	59.1	3	2.8	3	2.7	1,064	1,117
Alexander	27	83.9	27	82.3			2	6.1	322	328
Alleghany	9	65.2	9	61.2					138	147
Anson	34	48.2	33	47.7	2	2.8	2	2.9	706	692
Ashe	36	69.4	38	71.4					519	532
Avery	29	64.3	27	69.0	1	2.2			451	391
Beaufort	96	99.5	88	94.6	7	7.3	7	7.5	965	930
Bertie	66	85.9	69	89.6	7	9.1	7	7.5	768	770
Bladen	49	64.8	52	65.7	5	6.6	6	7.6	756	791
Brunswick	16	40.6	20	47.6	2	5.1	2	4.8	394	420
Buncombe	134	68.9	128	67.3	12	6.2	11	5.8	1,946	1,902
Burke	35	46.3	36	46.7	1	1.3	1	1.3	756	771
Cabarrus	47	51.1	61	57.7	4	4.4	6	5.7	919	1,058
Caldwell	71	74.2	74	76.7	5	5.2	5	5.2	957	965
Camden	10	87.0	11	90.9	1	8.7	2	16.5	115	121
Carteret	24	63.2	25	66.1	2	5.3	2	5.3	380	378
Caswell	15	33.8	17	37.0	1	2.3	3	6.5	444	460
Catawba	50	47.4	47	44.6	5	4.7	5	4 7	1,054	1,059
Chatham	33	75.9	37	81.1	1	2.3	2	4.4	435	456
Cherokee	19	38.9	18	37.3	3	6.1	3	6.2	488	482
Chowan	16	54.1	16	53.3			1	3.3	296	300
Clay	8	53.3	12	75.5					150	159
Cleveland	46	36.3	48	37.8	1	0.8	3	2.4	1,267	1,271
Columbus	103	80.9	111	84.9	5	3.9	8	6.1	1,273	1,308
Craven	49	72.3	51	73.9	4	5.9	4	5.8	678	690
Cumberland	90	71.9	62	52.2	11	8.8	5	4.2	1,252	1,187
Currituck	6	67.4	6	63.2	1	1.1	3	3.2	89	95

TOTAL NUMBER BIRTHS AND DEATHS UNDER ONE YEAR OF AGE (Exclusive of Stillbirths) AND MATERNAL DEATHS IN EACH COUNTY, WITH RATE PER 1,000 LIVE BIRTHS, 1937

	Infant Mortality				Maternal Mortality				Total Births	
	Place of Death		Place of Residence		Place of Death		Place of Residence			
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	By Place of Birth	By Place of Residence
Dare	6	52.2	7	59.8					115	117
Davidson	72	67.4	72	66.6	6	5.6	6	5.6	1,068	1,080
Davie	13	41.4	15	44.6					314	336
Duplin	73	72.8	91	87.8	7	7.0	9	8.7	1,003	1,036
Durham	147	89.4	92	67.2	17	10.3	5	3.7	1,644	1,369
Edgecombe	96	80.2	94	79.3	10	8.4	8	6.8	1,197	1,185
Forsyth	167	68.2	164	69.4	9	3.7	7	3.0	2,449	2,363
Franklin	54	75.6	64	86.6	2	2.8	5	6.8	714	739
Gaston	83	49.7	90	52.4	6	3.6	6	3.5	1,669	1,716
Gates	16	67.8	17	70.5	1	4.2	2	8.3	236	241
Graham	8	52.3	10	62.1			1	6.2	153	161
Granville	49	68.5	51	71.1	2	2.8	2	2.8	715	717
Greene	25	44.6	35	60.3	2	3.6	7	12.1	561	580
Guilford	139	52.2	130	49.8	20	7.5	15	5.7	2,663	2,609
Halifax	113	70.2	115	72.3	10	6.2	10	6.3	1,609	1,591
Harnett	63	60.6	80	74.8	3	2.9	10	9.4	1,039	1,069
Haywood	39	46.9	42	49.8	1	1.2	1	1.2	832	843
Henderson	29	54.9	29	56.0	2	3.8	3	5.8	528	518
Hertford	30	63.7	31	64.9	5	10.6	5	10.5	471	478
Hoke	31	76.0	31	74.9	2	4.9	2	4.8	408	414
Hyde	19	83.3	19	81.9	4	17.5	4	17.2	228	232
Iredell	58	48.5	56	47.2	11	9.2	7	6.6	1,195	1,059
Jackson	32	65.2	32	64.3	2	4.1	2	4.0	491	498
Johnston	89	55.8	111	67.2	15	9.4	17	10.3	1,596	1,653
Jones	15	55.4	17	58.6	2	7.4	3	10.3	271	290
Lee	30	71.8	27	65.9	2	4.8	1	2.4	418	410
Lenoir	112	106.9	92	92.7	16	15.3	10	10.1	1,048	992
Lincoln	29	53.3	28	53.9	1	1.8	1	1.9	544	519
McDowell	39	67.2	40	67.7	6	10.3	6	10.2	580	591
Macon	23	54.1	17	41.0	1	2.4	1	2.4	425	415
Madison	37	67.8	38	67.7	1	1.8	1	1.8	546	561
Martin	46	60.6	53	68.5	6	7.9	6	7.8	759	774
Mecklenburg	228	84.4	195	75.6	20	7.4	19	7.4	2,703	2,580
Mitchell	24	54.0	25	55.7					444	449
Montgomery	12	38.7	14	42.9	1	3.2	2	6.1	310	326
Moore	27	47.0	26	45.8	4	7.0	2	3.5	574	568
Nash	92	62.2	88	60.2	12	8.1	9	6.2	1,479	1,461
New Hanover	92	92.0	50	55.7	12	12.0	8	8.9	1,000	897
Northampton	46	74.1	52	77.6	1	1.6	1	1.5	621	670
Onslow	39	72.9	49	89.7	4	7.5	6	11.0	535	546
Orange	16	41.2	27	59.5	2	5.2	2	4.4	388	454
Pamlico	11	47.6	11	46.8			2	8.5	231	235
Pasquotank	25	69.6	25	71.0	9	25.1	5	14.2	359	352
Pender	22	53.4	28	65.1					412	430
Perquimans	19	78.8	19	78.5	2	8.3	2	8.3	241	242
Person	33	50.8	37	55.5			1	1.5	650	667
Pitt	108	76.0	110	75.3	2	1.4	2	1.4	1,420	1,460
Polk	23	92.0	17	74.6					250	228
Randolph	37	48.2	40	49.7	2	2.6	4	5.0	768	805
Richmond	53	63.5	54	63.6	6	7.2	6	7.1	834	849
Robeson	143	65.7	145	68.2	12	5.5	10	4.7	2,177	2,126
Rockingham	73	57.3	79	62.0	8	6.3	9	7.1	1,275	1,275
Rowan	74	57.6	74	58.3	7	5.4	6	4.7	1,285	1,269
Rutherford	54	52.8	55	53.8	3	2.9	2	2.0	1,023	1,023
Sampson	70	57.2	83	66.0	7	5.7	10	7.9	1,223	1,258
Scotland	45	93.0	47	95.3	3	6.2	3	6.1	484	493
Stanly	35	50.4	38	55.7	1	1.4	1	1.5	694	682
Stokes	37	70.6	43	77.9	1	1.9	3	5.4	524	552
Surry	64	58.8	62	58.1	6	5.5	6	5.6	1,088	1,067
Swain	15	38.8	16	41.6	1	2.6	1	2.6	387	385
Transylvania	18	68.2	19	71.2	1	3.8	1	3.7	264	267
Tyrrell	5	31.8	5	28.2	2	1.3	2	1.3	157	157
Union	39	41.4	42	44.8	5	5.3	4	4.3	942	937
Vance	22	45.8	30	43.5	7	10.0	6	8.7	699	689
Wake	187	92.8	169	83.9	14	6.9	14	7.0	2,016	2,014
Warren	47	70.4	51	75.2	5	7.5	7	10.3	668	678
Washington	26	94.2	26	93.2					276	279
Watauga	24	56.6	25	57.7	1	2.4	4	9.2	424	433
Wayne	105	86.2	102	84.3	12	9.9	12	9.8	1,218	1,222
Wilkes	65	63.4	63	61.0	3	2.9	2	1.9	1,025	1,033
Wilson	103	81.5	98	79.6	8	6.3	8	6.5	1,264	1,231
Yadkin	19	46.0	20	44.0	2	4.8	3	6.6	413	455
Yancey	21	49.1	23	52.3	3	7.0	4	9.1	428	440

PROGRAM

STATEWIDE CONFERENCE ON BETTER CARE FOR MOTHERS AND BABIES

Raleigh, N. C., February 15, 1939

All meetings will be held in City Auditorium.

Aldert S. Root, M. D., Chairman, North Carolina Section American Academy of Pediatrics, Conference Chairman, will preside over all sessions.

First Session, Wednesday Morning, February 15th

10:00—Conference called to order by the Chairman.

10:10—Greetings: Carl V. Reynolds, M. D., State Health Officer.

10:20—Outline of Maternal and Child Health Problems:
George M. Cooper, M. D., Assistant State Health Officer.

10:40—Symposium: Safeguarding the Infant and Young Child:
Led by Dr. Root.
(a) The Coordination of Public Health and Private Practice in Pediatrics:
J. Buren Sidbury, M. D., President, North Carolina Medical Society, Wilmington.
(b) Specific Preventive Measures in Infancy and Childhood:
J. LaBruce Ward, M. D., Asheville.
(c) Infant Care During the First Month:
Arthur H. London, M. D., Durham.

11:20—Five Minute Intermission.

11:25—Symposium: Reduction of the Hazards of Childbirth to the Mother and Baby:
(a) The Charlotte Plan:
W. Z. Bradford, M. D., Charlotte.
(b) The Obstetric Problem in Rural Areas:
John Z. Preston, M. D., Tryon.
(c) Demonstrations in Maternal Care:
Edwin F. Daily, M. D., Director Maternal and Child Health Division, United States Children's Bureau, Washington, D. C.

12:15—Informal Discussion:
Leaders—M. T. Foster, M. D., Health Officer, Fayetteville.
W. R. Parker, M. D., Health Officer, Jackson.

1:00—Luncheon.

Afternoon Session, Wednesday, February 15th

2:00—Greetings from North Carolina Medical Society:
Sen. T. W. M. Long, M. D., Secretary, Roanoke Rapids.

2:10—Greetings from North Carolina Dental Society:
Fred Hale, D. D. S., President, Raleigh.

2:20—The Organized County Woman in County Health Plans:
Dr. Jane S. McKimmon, Raleigh.

2:30—The Place of the Social Worker in a Better Maternal and Infant Health Program:
Prof. George H. Lawrence, University of North Carolina, Chapel Hill.

PROGRAM—Continued

2:40—Working Together Gets Things Done:
(a) The Moore County Maternal Committee:
Mrs. W. H. Currie, Carthage.
(b) The Junior Guild of Rocky Mount:
Mrs. Arthur Lee Dozier, Rocky Mount.
(c) High Point Junior League and Allied Services:
Mrs. E. T. Harrison, High Point.
(d) The Wilmington Sorosis Club:
Mrs. Louis B. Goodman, Wilmington.
(e) Coordination of Nursing Service, Medical Social and Junior League Work:
Mrs. Lewis Raulston, Greensboro.
(f) Miss Mary E. Thomas, Nutritionist, State College Extension Service, Raleigh.

3:40—Summary: Mrs. J. K. Pettengill, President, National Congress of Parents and Teachers.

3:55—Five Minute Intermission.

4:00—The Particular Needs of the Negroes:
Walter J. Hughes, M. D., State Board of Health.

4:10—Informal Discussion:
Leaders: Mrs. J. Henry Highsmith, State Board of Health.
Mrs. C. T. Wanzer, State President, American Association of University Women, Charlotte.

Evening Session, Wednesday, February 15th

8:00—Greetings: Governor Clyde R. Hoey.

8:10—Greetings: Mrs. Elwood Street, Chairman of the National Council for Mothers and Babies.

8:15—Maternal and Infant Care in a National Health Program—Federal, State, Local Responsibility:
Martha M. Eliot, M. D., Assistant Chief, United States Children's Bureau, Washington, D. C.

8:50—Reducing the Maternal and Infant Death Rate:
Fred L. Adair, M. D., Chairman, American Committee on Maternal Welfare, Chicago.

9:25—Summary of Points in Morning and Afternoon Sessions:
F. Bayard Carter, M. D., Professor of Obstetrics and Gynecology, Duke Medical School, Durham.

9:50—Resolutions.

10:00—Final Adjournment.

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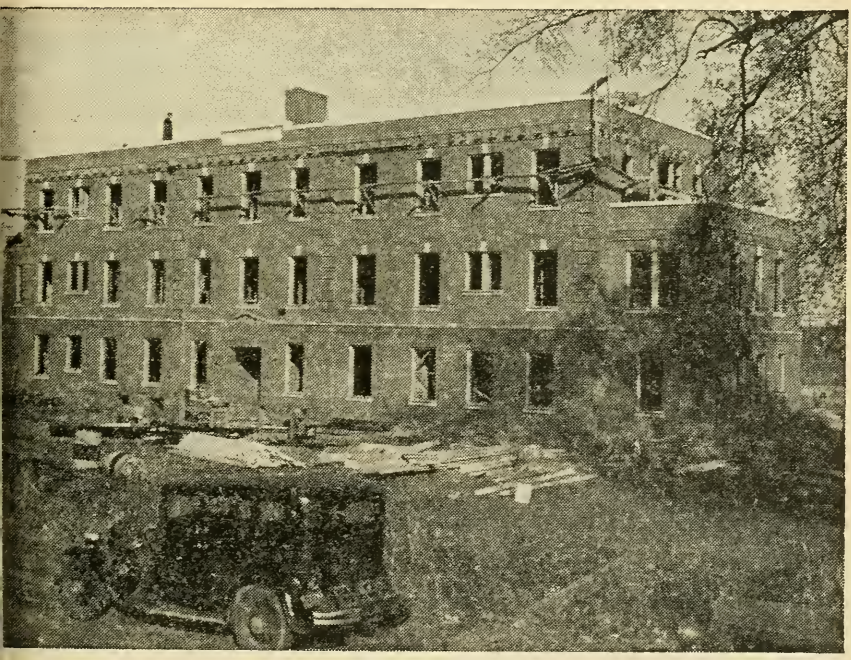
The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

This Bulletin will be sent free to any citizen of the State upon request

Entered as second-class matter at Postoffice at Raleigh, N. C., under Act of July 16, 1894. Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

Vol. 54 MARCH, 1939 No. 3



NEW COMMUNITY HOSPITAL FOR COLORED PEOPLE WILMINGTON

The above picture shows the new Community Hospital for Colored People in Wilmington now nearing completion. Upon completion it will be fully equipped in every detail and is expected to be a real health center for the colored people of southeastern North Carolina.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils
Appendicitis
Cancer
Constipation
Chickenpox
Diabetes
Diphtheria
Don't Spit Placards
Eyes
Flies
Fly Placards
German Measles
Health Education
Hookworm Disease
Infantile Paralysis
Influenza
Malaria
Measles
Pellagra
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Tuberculosis
Tuberculosis Placards
Typhoid Fever
Typhoid Placards
Venereal Diseases
Vitamins
Water Supplies
Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care
Prenatal Letters (series of nine monthly letters)
The Expectant Mother
Breast Feeding
Infant Care. The Prevention of Infantile Diarrhea.
Table of Heights and Weights
Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Instructions for North Carolina Midwives.

CONTENTS

THE Health Bulletin

PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. 54 MARCH, 1939 No. 3

Notes and Comment

By THE EDITOR

RIGHT here on the first page of editorial matter in this issue of the *Health Bulletin*, we want to correct a mistake, or rather a misunderstanding, which has arisen from an article written by Dr. J. C. Knox in the January issue of the *Health Bulletin* referring to the work being done all over North Carolina today in the diagnosis of particular types of pneumonia. Dr. Knox submitted a list of technicians and places including some hospitals and some private physicians in the State who took training at the Duke Hospital about a year ago in preparing themselves to do typing work in their communities. This course was given at Duke as a direct result of the work of a pneumonia commission headed by Dr. Hubert B. Haywood, of Raleigh, a member of the State Board of Health. The commission was composed of representatives of the North Carolina State Medical Society, the Wake Forest, University of North Carolina and Duke Medical Schools, with the State Board of Health. What is called typing of pneumonia is simply a method by which the particular form of the disease present in a patient is indicated, so that if it happens to be one of the types of pneumonia which may be satisfactorily treated with serum, the fact could be established early in the course of the disease and the patient's life thus saved by the prompt use of serum.

Unfortunately, it was not made plain enough in the article that the list of technicians given were simply those trained in the special course given at Duke which represented the efforts of the commission and, therefore, new work along this line. We regret that the misunderstanding occurred, to the effect that the names and places listed seemed to be the only ones in the State where this service could be obtained. On the other hand, there have been a large number of places successfully carrying on this work during the last two or three years and more, some of which we know and many of which we know nothing about. No one has a correct list of such technicians or hospitals. If we could obtain such an accurate list for the whole State, we should be more than glad to publish it.

We have received two or three protests from different people and the purpose of this statement here is to make amends as far as possible for an unintentional omission. In this connection, we would like to state that right here in Raleigh, the Rex Hospital has maintained one of the best laboratories known anywhere in North Carolina. They have at present and have had for some time, at least a year before this commission began its studies, three technicians competent to do this typing of pneumonia. Dr. Verne S. Caviness, a practicing physician of Raleigh, was

one of the first pathologists in the field. He went to the Rockefeller Institute and prepared himself to do this work fully a year before the commission referred to above was established. The Superintendent of the Marion General Hospital at Marion also has informed us that they have had a competent technician that worked there for more than a year. Naturally, there are scores of other hospitals and other private laboratories and technicians at work in the offices of private physicians prepared to do this work.

We hope that all of these activities may result before many more years in a large reduction of deaths from pneumonia. We are encouraged to believe that it will. The reports so far received covering the year 1938 indicate that there are about 200 fewer deaths caused by pneumonia reported than were in 1937. This indicates satisfactory progress in the prevention of deaths from such a terrible disease. At the same time, more than 2,700 deaths occurred last year from pneumonia, many of them people in the prime of life, when the sacrifice to such a disease is greatest. It is well to repeat right here what we have said many times in these columns in the last few years, and that is that progress in prevention of disease and in medical and surgical work the world over is more rapid at this time than any other period in the world's history. We are reminded by one of our physician friends in this connection that at present "some highly interesting work is being done in this State with X-ray treatments for pneumonia which promises to be better and quicker as well as safer than serum." We merely mention the foregoing to emphasize again that scientific medical progress, particularly in the preventive field, is moving much more rapidly than provisions for the practical application of such measures. When the social, political and economic world overtakes the scientific world, then we suppose the millennium will be here.

* * * *

A few years ago we published an issue of the *Health Bulletin* presenting pictures of one or two of the Negro hospitals in the State and describing something of the work of hospital facilities for Negroes. The publication proved to be highly interesting to many groups of people and, therefore, this month we are repeating something of that plan. National Negro Health Week, which is an annual observance emphasizing the special health work among Negroes throughout the South, occurs this year about the first week in April. We have decided, therefore, to devote this issue in part to a presentation of some aspects of the Negro health program and some of the various activities being carried on in many sections of the State to meet and solve these problems.

In order to illustrate the type of hospital accommodation now available independently for Negroes, we are publishing a photograph of the new hospital recently opened in New Bern and erected through the efforts of the Episcopal Church there. Also, the fine new hospital in Wilmington now under construction and nearing completion. Descriptive articles describe the efforts at both places.

We have no desire or intention to single out the problems of the Negro for a special discussion, because one of our cardinal principals in this office for nearly a quarter of a century has been that we regard the Negro and his problems identical with the white man and his problems, all other things being equal. We regard the Negroes as people, and therefore in need of the same kind of treatment when they are sick that

the white men need. We feel that the Negro race in North Carolina has made greater progress in the last seventy-five years since they emerged from slavery than any other race of people in history. They have some distance yet to travel, but they are manifesting the ability to push on and to attain things for themselves that would have been thought impossible even twenty-five years ago.

In discussing the peculiar problems of the Negro in the field of public health and preventive medicine, we have in mind some things that only the Negro himself can remedy, matters that are not at all a public health problem. An example of this is illegitimacy. In the last year for which we have complete tabulated reports, there were 36 counties in North Carolina that reported 20 per cent or more of all Negro births as illegitimate. The State Board of Health or public health workers can do nothing about this. Neither can the white man. This is a problem that the Negro and the Negro alone can settle, and the sooner they set about doing it, the better it will be for the health and welfare of their race. Their leaders know this.

On the other hand, there are some things in the field of public health which must be the concern of the white people just as much or more than the Negroes. One example of this is tuberculosis. In the year 1937, deaths from tuberculosis of the respiratory system in North Carolina numbered 1,518, according to the place of residence. Of this number 567 were white, 3 were Indian, and 951 were colored. Thus, it will be seen that with the Negro constituting about 28 per cent of the total population of the State, he contributed more than 60 per cent of deaths from tuberculosis of the respiratory system.

In this one large public health problem, the Negro could not be expected to lift himself out of it by his own bootstraps. It will require the combined efforts and all the resources of both white and colored people in the State to remove this one of the Negro's many handicaps.

National Negro Health Week is sponsored by the United States Public Health Service and is a recognized institution in the field of public health education among the Negroes. It is a pleasure to state here that the leaders among the Negroes have accepted their responsibility and have done a great deal of work toward enlightening their own people and arousing them to efforts to help themselves. The Editor of this publication is averse to special weeks and special days for this, that and the other as a general rule. He believes in public health work 365 days in every year, every hour in every day, but in this case it is well to make an exception in order to accentuate attention on the particular needs and problems and the best methods of meeting them.

* * * *

As this issue goes out to its readers, the sun will be passing the equinox, the days will be getting warmer and longer, and house-fly time will be with us again. Helpless babies are the chief sufferers from the menace of house-flies. House-flies carry diseases that oftentimes prove fatal to babies, to say nothing of the annoyances which help to overturn the delicate balance in any baby's health.

Modern science recognizes two definite methods of dealing with the house-fly problem. One is the prevention of breeding places. Since the automobile has taken the place of the horse for transportation purposes, house-fly breeding is less a problem in the cities and larger towns than

it ever was before. In many of the smaller towns and villages and the country districts where it is necessary to keep horses and cattle for domestic use, the problem still remains. By this time every one should know where the breeding places of house-flies are and how to prevent them. All such places should be cleaned up and kept clean by every householder.

The second method of dealing with the problem is thorough screening of all residential premises. The month of March is a fine time for the householder, be he tenant or owner, to see that his doors and windows are screened, that the screens fit, that there are no holes in the wire, that the hinges on the screen doors work and that no place where a house-fly can enter is neglected.

If these two methods should be employed by everybody, the house-fly would no longer be a bother to anyone.

Hearing Before Joint Committee on Appropriations

By CARL V. REYNOLDS, M. D., State Health Officer

Raleigh, N. C., January 16, 1939.

At their request this brief was mailed to the Joint Committee on Appropriations.

WHEN the Governor and the Advisory Budget Commission recommended a record budget of $154,514,899.00 for the next biennium, we were sorely disappointed and discouraged to learn through the "Green Book" that our requests were not granted, but instead—actually cut.

I say we were disappointed and discouraged—but we will not be dismayed. Please dispel from your minds the thought that what I have to say is derogatory to any department's efficient organization and the good accomplished by their advances—but as an appeal for *further consideration* to adjustment in the evaluation of funds to the State Health Department.

I unhesitatingly and without fear of sustained contradiction, say to you that our morale, mental, physical and economic advancement depends primarily on our physical soundness. To be morally fit you must be mentally fit; to be mentally fit you must be physically fit; to be physically fit you must be basically healthy.

Schools

The total amount spent in our school system is $25,550,073.00 through our efficient State Department of Public Instruction. But listen, if you please, to this: In 1923-1924 there were 39.4 per cent of the 546,928 white enrollment in the public schools of our State and 56.4 per cent of the 247,087 Negro enrollment failed to be promoted—a mean average of 47.9 per cent of the total enrollment. In 1936-1937 there were 882,006 pupils enrolled in the schools and of these 28.2 per cent failed to pass—22.9 per cent white and 33.5 per cent colored. These repeaters cost the State a vast sum of money. Fifty per cent of these repeaters could be saved if funds were available at the saving of many thousands of dollars to the State. It seems to me that it is "penny-wise and pound-foolish"

to spend millions of dollars in repeaters when thousands would prevent such a large expenditure.

The primary objective of public health work is, of course, to reclaim and rehabilitate humanity through the fundamental method of prevention.

Automobile Accidents

We are cutting down the annual death rate from automobile accidents through a splendidly organized and managed State Highway Patrol and through the process of education. And may I add, that this is a worthwhile and should be encouraged factor in saving human lives. But, gentlemen, it is costing us money to do it, and money that none will begrudge. But I desire to call to your attention that there were only 910 people killed on the North Carolina highways in 1938, which was a reduction from 17 per cent to 12 per cent of lives lost in 1937, at a cost of $365,995.00. It is recommended that an appropriation be made this year of $487,026.00 for the same purpose.

The saving of human life through this method is to be commended. Each life snatched from the throes of death constitutes a sound investment for the State and its taxpaying citizens.

Pneumonia

May I call to your attention that the North Carolina State Board of Health could, and I believe this to be a conservative estimate, furnish to the sufferers of pneumonia, 9,000 in number, anti-pneumonia serum for $50,000.00 annually, and by so doing save 1,500 lives of the 3,000 that die annually from this disease and prevent many of the 9,000 meeting an untimely death due to complications arising from the pneumonia, notwithstanding the fact that they were apparently cured.

The cost of a life saved on the highway is $1,718.00; the cost of a pneumonia case saved is $33.33.

Insanity

Insanity results in untold instances from diseases which are both preventable and curable. The population of the three insane asylums increased from 5,904 in 1934 to 6,673 in 1938, and the Caswell Training School increased from 627 to 723 during the same period. The cost and care of these people was $723,-924.00 in 1934-1935, as compared with $1,139,565.00 for the present fiscal year; the Caswell Training School cost increased from $105,135.00 to $180,613.00 for the same period.

Prison Camps

In the prison camps, five and one-half years ago, the total population was 4,660, as compared with 9,693 in January 1, 1939. In the meantime, the cost of operating the State prison system increased from $1,264,-659.00 to $2,315,926.00.

The insane asylums and the prison camps are increasing in population yearly, many of whom could be relieved from their mental diseases and criminal qualities by spending our money in discovering the cause of the illness or crime and the prevention or cure of the disease that is destroying our manhood and womanhood today.

Gentlemen, we are, just as sure as the sun is shining, spending our money for the care of those who have been destroyed rather than spending our money to prevent them from being destroyed.

State Aid to Counties and Cities

Now just a word. I want to call your attention particularly to two Divisions in our Department that it is absolutely necessary to have the requested appropriation restored if we continue to function properly. First, that of State aid to the counties for public health work. The fiscal year 1929-1930 to 1932-1933

there was State aid given to each county $3,000.00 plus. At that time there were 36 organized counties within the State. When the appropriation was reduced to $59,300.00 in 1934, 36 counties being operated, the appropriation to each county was $1,647.00. In 1938-1939 there are 76 counties to participate in the State funds and the amount of each county is $1,350.00.

In other words, the number of counties participating in State funds has doubled and the State Aid is less. The reason for the increase in State Aid appropriation amounting to $197,400.00 requested was to bring the State in line in supporting the 76 counties on a reasonable basis. It is not fallacious to assume that the State should be contributing $3,000.00 per county. Within the coming biennium, if the funds requested were granted, it is not unreasonable to assume that every community in the State would be provided with local health service. Hence, the reason for the $300,000.00 request.

Another factor is that we are utilizing during the current fiscal year some $60,000.00 of balance in Federal funds that will not be available next fiscal year. If the State Aid figure remains at the $103,000.00 recommended by the Advisory Budget Commission, it will mean that $60,000.00 worth of health service now being provided to the local citizens in 76 counties in our State must be cut by an amount of $60,000.00 unless the local taxing authorities see fit to put up the additional amount. Our experience in dealing with them is that every Board of County Commissioners in the State feels that they are putting up as much as they possibly can; that the State is not assuming its responsibility in carrying its load. I think this can be clearly shown when we consider that the total budgets in these 76 counties amount to $977,530.00. From these figures it will be noted that the State is only contributing 10.5 per cent of the total cost of local health service. It is not unreasonable to assume that the State should be contributing at least 33 1/3 per cent instead of the 10 1/2 per cent now being contributed.

Laboratory

It is imperative that we have the Laboratory request restored, or we will, of necessity, go backward during the next two years.

The State Laboratory of Hygiene is primarily a service institution whose chief duty is to aid in promoting public health in North Carolina. The activities of our Laboratory are limited entirely to those procedures intended to aid in the control of infectious diseases in man.

Approximately one-third of our personnel is used for the production of anti-toxins and vaccines, which are distributed free or sold for approximately the cost of production. About two-thirds of our personnel and funds are used for the examination of specimens from patients and samples of water from public and private supplies. These examinations are as follows:

Biennium ending June 30, 1934 247,000
Biennium ending June 30, 1936 416,000
Biennium ending June 30, 1938 ..... 618,000.

For the first six months of the present biennium 212,500 examinations have been made, whereas 146,845 were made during the same months of 1937. Fair prices for the services of the State Laboratory of Hygiene would yield more than $3,000,000.00 per year.

If the Laboratory is to render increased service, it needs increased funds. The following brief statement sets forth our financial condition:

	Actual 1937–1938	Estimated 1938–1939	Recommended 1939–1940	1940–1941
Expenditures	$ 117,679	$ 112,980	$ 108,115	$108,090
Receipts	55,766	46.000	49,000	49,000
Appropriation (Tax Money)	$ 61,913	$ 62,980	$ 59,115	$ 59,090
Net Change on Basis of Experience 1938–1939		+1,067	—2,798	—2,823
Net Change in Social Security Funds		—270	—646	—646
Net Gain or Loss of Public or Tax Funds		+797	—3,444	—3,469

We have requested an increase of approximately $17,000.00 over the funds actually expended in 1937-1938. This would provide the employment of seven additional persons and give us adequate funds for the purchase of Scientific Supplies, Budget Item No. 706, which provides the material used in the examination of specimens and in the preparation of anti-toxins and vaccines.

In the light of our experience it is our firm conviction that this increase is definitely needed, if we are to render the service which the people of North Carolina want and to which they are entitled.

Gentlemen, I do not believe you will stop our progress when 85 per cent of our people are in favor of health protection. It is for you to decide!

Good Shepherd Hospital for Colored People New Bern, North Carolina

By REV. R. I. JOHNSON, Business Manager

WHEN the great fire burned over forty blocks of the city of New Bern in 1922, making 3,500 people homeless, nine-tenths of whom were colored people, it became necessary to have emergency hospitalization at once to meet the need for sickness and accident, for it was winter and many people came down from various ills from influenza and exhaustion to collapse from chronic complaints. To meet that need we turned St. Cyprians Church into an emergency hospital and used it as such for about six weeks. The experience was illuminating with reference to the need of hospitalization for Negroes, not only here, but everywhere, and our studies revealed that the need, as one has described it, "Is one of the major social problems of our day in this country."

The Episcopal Diocese of East Carolina, at the request of the writer, gave encouragement to the movement to try to meet that need in a small way in this immediate area, where there are 90,000 Negroes in the seven counties adjacent to New Bern. The movement met with many set-backs and delays occasioned by the depression, but was finally brought to consummation in 1937-1938 in the building of the Good Shepherd Hospital at New Bern. In this achievement the Diocese of East Carolina was assisted by the Episcopal Diocese of Pennsylvania and the Duke Endowment. Building and equipment today represent an outlay of about $68,000.00. The equipment is modern in every way and the building is laid out in the most efficient manner. It has been called one of the most complete small general hospitals in this section of the State. The staff is

composed of a biracial group of white and colored physicians and surgeons and the nursing service is carried on by a group of four graduate nurses and several lay assistants.

The equipment, not quite paid for, represents as it stands the generosity of numerous friends, among them small donations from a large number of citizens of New Bern, white and colored. Special gifts locally were furnishing of a private room by Mr. I. H. Smith in memory of his late father; furnishing of a private room by Bishop E. L. Madison, of the Methodist Church; furnishing of a private room by the Scottish Rite Masonic Bodies of New Bern, white; furnishing of the Emergency Ward by the Woman's Auxiliary of the Diocese of East Carolina; furnishing of a nursery by the Missionary Society of Centenary Methodist Church, South, white; furnishing of a second nursery by the Masonic Lodges and Order of Eastern Star, white; several small gifts of value; besides a large group of contributors in various parts of the country, among them Miss Mary Johnston, of Ohio, who furnished the major operating room.

Bennett College Serves the Community in Child Health Program

By FLEMING P. KITTRELL, Ph. D.
Professor of Home Economics and Dean of Students, Bennett College for Colored Students, Greensboro

A FEW years ago, an exclusive study was made of Negro infant feeding practices in Greensboro, N. C., by one of the faculty members of Bennett College. This study marked one of the very few scientific studies on infant feeding practices in Negro families. The results showed some very startling facts. To begin with, the prenatal care of the infant was far from satisfactory. Mothers had diets composed mostly of starch foods, fat meats and sweets—this type of nourishment giving, of course, a very poor start for the infants. In spite of the fact that a great majority of those mothers nursed their babies, colds and rickets were most prevalent in the infants. This particular finding would seem to throw some light on the poor quality of mother's milk that can be markedly deficient in vitamins A and D.

With these background facts in mind, Bennett College has been eager to serve the families of the community in a constructive health way. It is felt that care during prenatal days and careful feeding during the early years of the child's life will go a long way toward laying the foundation for healthy men and women. During the past year the college has been fortunate in its establishment of a Nursery School and Parent Education Center.

The purpose of this project is twofold. First, it offers to the students an opportunity to observe and to participate in those activities which will give the young child the maximum amount of health and adjustment, and it also serves as a laboratory for the parents of the community. They come and get first-hand information and help in the health and emotional guidance of their children. Through the Committee on Community Relations, the college is able to serve a large group.

Meetings are held for parents once a week with the nursery school staff and students of the college to dis-

cuss the problems of child welfare and guidance. The meetings are not confined to just those parents who send their children, but to any parent who is interested in family development.

The program of the nursery school consists of daily reports sent to the parents concerning the kind and the amount of food the child has eaten, and any unusual types of behavior observed during the day. The parents send in daily reports on the child, stating the kind and amount of food that has been eaten, stating whether or not the child has followed regular habits of eating, whether the child has had cod liver oil, the amount of sleep, and any unusual behavior observed at home.

Well-planned and attractive menus are prepared for the children. A copy of the menu is sent to the parents each week. The purpose of this is two-fold: First, it gives the parents an opportunity to see what the children have eaten during the various days of the week, and at the same time serves as a suggestion for the type of food that can be prepared at home. To date, the nursery school has been operating five months. Always it is interesting to note the constant increase in weight of each child, along with very few colds; greater activity, along with increasing poise and general intelligence.

Along with the physical development of the child, a study is made of his emotional life. Careful observation notes are recorded by the observers and analyzed to discover what the child is doing, thinking and feeling, and hence what the child is learning. These observations are discussed with parents, and they are helped to make similar observations on their own children. It is interesting to observe that the child's response to any situation is in direct relationship to his environment and the type of guidance which he receives.

It is hoped that through the Nursery School-Parent Education Center at Bennett College a real contribution can be made to the general health and well-being of families in the community.

The Negro Health Problem

By MAX C. KING, M. D., President, Old North State Medical Society

ONE of the main services a democratic government must offer its citizens is a safeguard against ill health as well as security against other social evils. In North Carolina we have a population of about three and one-half million people, about one million of whom are Negroes. With as large a rural population as we have, made up of both races, North Carolina's problem of reaching with like emphasis all elements of its population with an intensive health program must be more perplexing than in those States with less rural but a more concentrated urban population.

The task of making the people more health-minded is often retarded by the lack of adequate personnel to inculcate the philosophy of health. The generally poor educational advancement for its reception, together with occasional misguided direction of our weapons are hard in the rural areas, may make the results so discouragingly slow, that interest lags, and alertness gives way to indifference. I am convinced that social agencies of the Negro race could be more effective in aiding the State Board of Health in its vast program if more emphasis was placed upon

the importance of periodically stressing the importance of health, even in the face of seeming indifference on the part of those whom we serve.

As pointed out above, since there exists in central and eastern North Carolina a large rural Negro population, some facts recently released by the Department of Commerce are of interest. It shows a great disparity between the percentage mortality of white children and Negro children under one year of age as compiled from records for 1937. In that year there were 5,180 deaths of children under one year of age. About two-fifths of that number, or 2,094, were Negro children. Of that number there were 1,282 whites in rural communities and 1,534 Negro children in rural communities. Of the total deaths at this age among Negro children 560 were in cities. Whereas this ratio may vary from time to time, yet I am sure it is safe to say that this more or less shows a picture of the general ratio at other ages. Environment, lack of care and incidental diseases, all of which may be covered by economic conditions, may be given as main causes, yet ignorance and its ally—superstition—will cover so many of them that what is left will not detract from a very creditable showing.

In the light of the existing situation an approach through the process of education by members of Negro organizations for improving social conditions; Social Service workers and others devoted to such causes are aiding much. It is quite evident that the most effective results must come by activities of those who sympathetically understand the psychology of those victimized by disease.

In this respect the incorporated organization of Negro doctors in the State, The Old North State Medical, Dental and Pharmaceutical Society, has done much in making sentiment for the recognition of the importance of better health standards. This organization is made up of 251 members, 143 of whom are physicians. These physicians are stationed in all of the large cities from Asheville to Elizabeth City, and in most all of the larger and some of the smaller towns. Aside from a day-to-day assistance in educating for health, through affiliated local organization they give their services for one week annually in an intensive campaign of education among the people of their several communities. Through the years National Health Week has been observed among Negroes in North Carolina and has by now become the conscientious duty of all leading citizens.

This program has had the hearty endorsement of the State Board of Health, which has always recognized that safety of the people of North Carolina is only obtained by creating health consciousness in all citizens of the State.

The Beginning and Growth of the Colored Community Hospital of Wilmington, North Carolina

By F. W. AVANT, M. D., Wilmington

THE Colored Medical Society of Wilmington, N. C., had been led on for a number of years, by an unrelenting determination to establish a hospital here in our city, where the members of our Medical Society might avail themselves of the cultural environments attained in a well-regulated hospital, and where we might treat the diseases of those

patients of our own group who might entrust themselves to our care under the most favorable conditions and by the most modern and scientific methods known to the medical and surgical world.

We desired also to establish a Nurses' Training School, where the young women of our race might receive adequate training in the art of nursing and those refining qualities which would make them capable of rendering invaluable services to the community in which they may choose to locate, either in the hospital or the private homes. Thus working together we might help to reduce the already too high morbidity and mortality of our people.

To accomplish this great objective, this pressing need and great ideal, a city-county drive was instituted to secure funds, to purchase the present building. Under the leadership of Doctors F. F. Burnett and John W. Kay (deceased), a host of well-wishers and loyal friends, both white and colored, responded.

The present building had been a combination drug store and dwelling, a structure quite unsuited for a hospital, but the building was purchased September 20, 1920. To increase interest in the institution and to secure general approval, the Grand Master of Masons, Dr. James E. Sheppard, and a special committee appointed by him came down and laid the corner-stone in the building.

The institution was operated by a self-perpetuating Board of Trustees, under a charter obtained from the State of North Carolina. The charter members were Julius A. Murray, David Bryant, Thomas Hooper, Rev. J. M. Jenkins, Rev. A. J. Wilson, Rev. W. H. Moore. Then later on an advisory committee was appointed by the City and County Commissioners, namely: Dr. L. E. Farthing (deceased), Mr. John H. Hamilton, Superintendent of Health of New Hanover County and now in charge of State Laboratory, Mr. C. C. Chadbourne, Mr. W. R. Dosher, Postmaster of Wilmington at present, and Dr. James H. Hall, County Commissioner.

Dr. F. F. Burnett, Superintendent; Dr. John W. Kay (deceased), Assistant Superintendent, and Miss Georgia King, Registered Nurse, was Superintendent of Nurses, with four probationary nurses under her.

The admission of patients at first was rather slow, because it was quite difficult to educate some of the people of our group to seek or accept hospitalization, but by using careful psychology, patients were gradually persuaded to enter the hospital in increasing numbers.

We pause to pay a tribute of respect and honor to our lamented friend, Dr. E. R. Hart, who gladly accepted an invitation to become surgical instructor and general advisor at the hospital. Soon afterward he became ill and died, to the great sorrow of those who were connected with the hospital.

Miss Salome Taylor, a well-trained, cultured, Christian woman, having taken training at Lincoln Hospital, New York City, and nursed in hospitals of Kansas City and Atlanta, where she was Night Supervisor, was called to become the Superintendent of Nurses in this hospital, and she took charge of the nurses May 6, 1922. Nurse Taylor has been a wonderful help to this hospital, and I doubt seriously if her equal could be found. She has lived in this hospital and exercised a wonderful influence over the nurses, patients and doctors, and she has given of her means to assist deserving nurses leaving this hospital to advance in their profession at other institutions. Even though her salary was cut al-

most in half, she remained and never complained.

Then, Dr. J. W. Kay, Assistant Superintendent of the hospital, died, and one change after another occurred in rapid succession. Postmaster Dosher, Mr. C. C. Chadbourne and Mayor Walter Blair of our city, headed an active and persistent appeal to the City and County Commissioners to take over this hospital and to make regular contribution to maintain the institution, which petitions were finally granted.

So, once more we are forced to express our gratitude and sincere thanks to the above named gentlemen and all who assisted them in making it possible for this hospital to continue to operate with success. Mr. J. Allen Taylor, Mr. W. H. Sprunt and Mr. W. D. McCaig, were always ready to champion our cause, and we depended upon them. The Duke Foundation consented to give a dollar per day in helping with the indigent patients, and we appreciate all of these aids that have come to assist this most deserving institution which is doing a tremendous amount of work relieving the sick and poor of our people.

Several years ago, Dr. John H. Hamilton, of the Advisory Board, offered a resolution which resulted in a change in the administration of the hospital. He advised and it was approved that Nurse Salome Taylor, Superintendent of the Nursing School, become the Superintendent of the hospital also. It was then arranged that Dr. F. F. Burnett and Dr. F. W. Avant would alternate services each month, having charge of all indigent patients, as the service changed, and at the same time care for their own private patients, in the hospital, and all emergencies.

The hospital soon outgrew its capacity. Patients were so numerous that often we were forced to place mattresses on the floor and allow patients to sleep on the operating table. The physicians in charge have had to work all day and late into the night to keep this volume of work moving. They taught in the Nursing School, operated the X-ray Room and Laboratory, performed operations of almost every kind, and did all of the other branches of medicine, except eye, nose and throat.

The Nursing School has made a grand contribution in the nursing of the sick efficiently and sending out nurses who have dignified their profession. Twenty-three nurses have graduated from the Nurses' School; six are employed in the State Hospital of New York City and two in West Virginia, one in Washington, D. C., and one in New Jersey and ten in North Carolina; all of them have passed the North Carolina State Board.

During the past twelve years we have admitted to this small hospital, with only twenty-three beds and four bassinets, 6,237 patients; hospital days 64,041, major operations 1,129 and minor operations 2,144. There have been 766 births. We have had 386 deaths, which death rate is much too high, but many deaths have occurred because a great number of patients would not enter the hospital until they were at death's door, and a great number with intestinal obstruction and general peritonitis, etc., will not consent for operation until some relative is notified and must come from a distant place or State before an operation may be done.

We have enjoyed the unstinted assistance of all of the white physicians, and again express our appreciation to them, especially to the specialists. With special reference and with the highest esteem we wish to memorialize Dr. H. A. Codington and Dr. Ernest Bulluck, who have

never found it too late, too hot nor too cold to come to our assistance whenever we needed their advice, consultation or help, and the memory of these two friends have been deeply engraved in the acts of mercy performed in the old Community Hospital.

We are now looking forward to entering the new hospital, which is to be a sixty-bed hospital, including the ten bassinets. This hospital is to be a three-story structure, with elevator service. It is to be modern in every particular. The Nurses' Home was not included in the sum appropriated for the erection of the hospital. It is hoped, however, that funds will be secured for this purpose.

Under these new circumstances and conditions, we hope to be of much greater service to the sick of our community and to do much to reduce the high death rate of our people.

With the larger hospital we will have a mixed staff and Trustee Board, two internes or house physicians and twenty-five nurses.

The funds for the erection and furnishing of the new hospital were furnished by a grant from the W.P.A. and the remainder by the City and County Commissioners. This was not so easily accomplished, but the Commissioners and all of our white friends worked very hard to overcome many disappointing aspects that arose from time to time. But seeing the building almost completed, our hopes are rising almost like a dream and we turn back through the pages of memory of work in the old hospital as a happy recollection and our hearts fill with the thoughts of what a joy it will be to serve our patients in a new modern hospital.

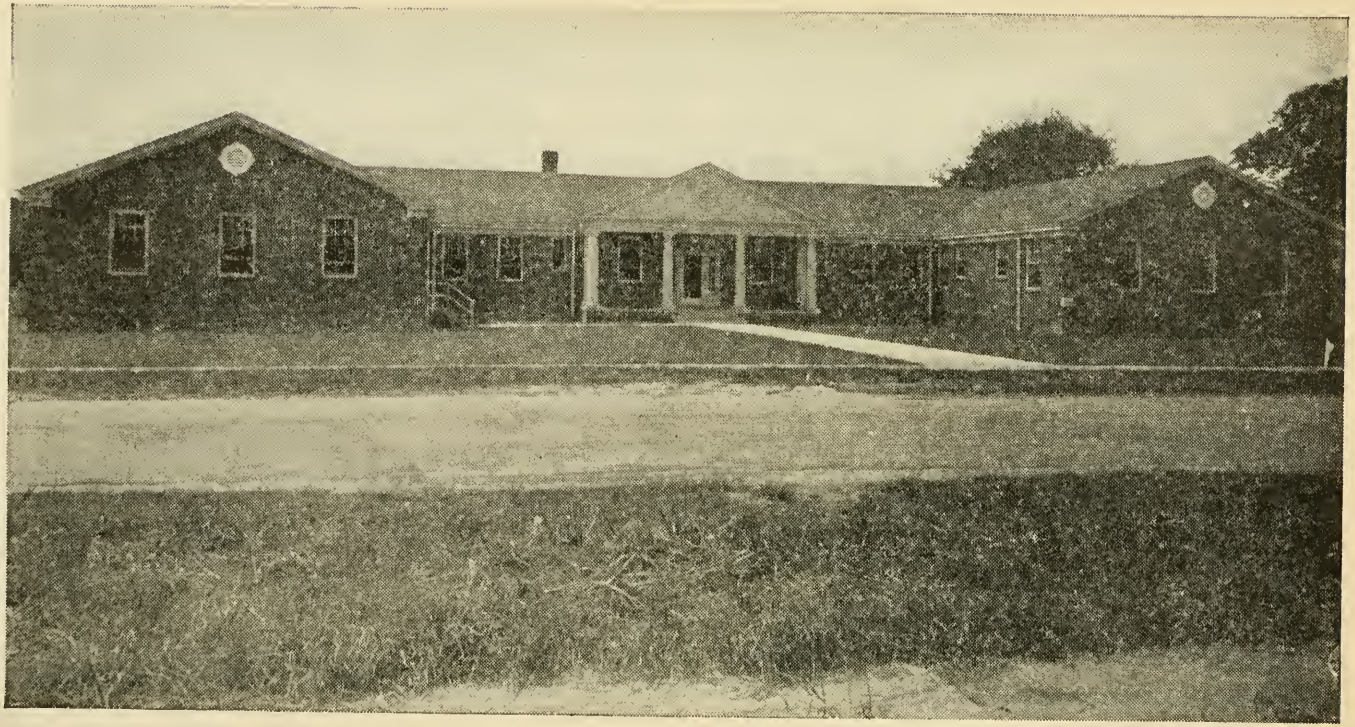
National Negro Health Week in Granville County

By E. E. TONEY, M. D., Oxford, N. C.

IN the past the observance of National Negro Health Week had been a matter of routine in our county. The spirit and enthusiasm of Booker T. Washington, who started this movement, was lacking. Last year, however, through the stimulation of our county health officer, Dr. J. A. Morris, the work was broadened and instead of a few talks and demonstrations here and there, the whole county participated as a unit.

In December, 1937, a committee consisting of Rev. H. S. Davis, Principal of Mary Potter School; Professor T. K. Borders, Superintendent of the Colored Orphanage, and Dr. E. E. Toney, local physician, met with Dr. Morris and Dr. Walter Hughes of the State Board of Health. It was decided then that a representative from every community in the county would be asked to meet with this committee and form a permanent organization.

On January 15, 1938, representatives from the various communities met in the Court House at Oxford. The meeting was addressed by Dr. Hughes. The organization was effected and the following officers were elected: Dr. E. E. Toney, Chairman, Mrs. Maude Lassiter, Secretary, and Mrs. M. B. Williams, County Supervisor, was added to the original committee. Plans are already underway for this year's Health Week program, and we expect to go far beyond last year's achievements.



The above is a picture of the Good Shepherd Hospital for Colored People of New Bern. The Health Department Nurses of Craven County say that this hospital is a wonderful asset to their community. One corner of the building is used by the Health Department for venereal disease clinics and maternity and infancy centers. Both white and colored physicians of New Bern compose the medical staff. Edith M. Anderson, a colored nurse of St. Agnes, is Superintendent of Nurses.

(See article elsewhere in this issue by Rev. R. I. Johnson.)

The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

This Bulletin will be sent free to any citizen of the State upon request

Entered as second-class matter at Postoffice at Raleigh, N. C., under Act of July 16, 1894. Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

Vol. 54 APRIL, 1939 No. 4

Easter Greetings

Christ is Risen

"Be Ye Kind One to Another"

THE Health Bulletin

PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. 54 APRIL, 1939 No. 4

Greets Conferees; Outlines Responsibilities

By CARL V. REYNOLDS, M. D., State Health Officer

This Address of Welcome was delivered in the Raleigh Auditorium before the opening session of the Conference for the Better Care of Mothers and Babies, which had an attendance that exceeded all expectations.

THIS morning we are embarking on a program of paramount importance and of vast proportions. It is of such basic significance to the States and Nation that it is vital in determining our economic independence or dependence, or security or insecurity.

To express it differently—to save the mother and child is saving the Nation — exchanging sorrow, sickness and poverty for happiness, health and security. Save the 10,769 mothers who die annually at childbirth and 119,931 babies that die in the first year of life—is our goal. It can be done, to a large degree, by placing scientific methods within the reach of our people. This should be their heritage and the way is clear.

The financial responsibility lies within the State and Federal Governments, and the service rendered will challenge the ingenuity of the medical profession.

There is more pleasure in anticipation than retrospection. However, to enjoy progress we must know the past to appreciate the present and to prepare for the future.

Cites Our Background

Our forbears came to this country in search of life, liberty and the pursuit of happiness. Our forefathers labored, suffered and sacrificed that we might live in a land of plenty. They builded well, yet in this land of plenty there are those who need food, shelter and medical care that are not getting it. Today we are here to discuss the unnecessary maternal and infant death rate. And, to reiterate, that it is our ambition that all potential mothers have the best of prenatal, obstetrical and postnatal care as their right; that every child shall have the maximum protection against infectious diseases and defects that impair physical, mental or moral fitness to compete for his place in the world.

The President appointed an interdepartmental committee to coordinate health and welfare activities, and a national committee to study

DR. COOPER INDISPOSED

His many friends throughout North Carolina will regret to learn that Dr. G. M. Cooper, who edits "The Bulletin," has been indisposed, and was confined to his home when the copy for this issue was prepared. It fell to other hands, which could not hope to match Dr. Cooper's experienced skill, to do the job this time, and it is sincerely hoped that he will be back in his office at an early date, as this issue goes to press.

the interdepartmental committee's report with the purpose in view of adopting ways and means of correcting existing unsatisfactory conditions.

The first recommendation of this committee, the interdepartmental committee, and of the national committee, was on the welfare of maternity and child health.

We will have presented at this meeting facts of outstanding moment. The State Board of Health officials could not be insensible to the distinction of having North Carolina selected as the first State in the Union to hold a joint meeting with national committee members in conjunction with State, medical, public health and lay representation on such a vital subject as the saving of mothers and babies.

Dr. G. M. Cooper, Pioneer

Dr. G. M. Cooper, Director of Maternal and Infant Care of the North Carolina State Board of Health, who, for twenty-one years has through an educational program, advocated the need for the better care of mothers and babies, is rewarded today in seeing his efforts culminate in such an epoch-making program, presented by State and out-of-State speakers of national reputation. To him it must be a dream coming true.

We are especially privileged to have with us speakers, all of whom are sound, logical and forceful, who will bring us messages full of food for thought and action.

We appreciate your coming and hope we can make your visit as pleasant to you as it will be profitable to us.

May this conference awaken the body politic from its somnolence and arouse anew an active and progressive program for the welfare of our mothers and babies, so that we can place intelligence in advance of emotion—an emphasis on prevention and preservation rather than on end results.

When we can take tragedy out of the deaths that occur as the result of the daily hazards of life and place it where tragedy rightfully belongs—in the preventable deaths—our battle for life preservation will have kept step with scientific progress. We then can appeal to logic rather than to the emotions.

An Analytical Study of the Recent Maternity and Infancy Conference

By MRS. J. HENRY HIGHSMITH, Assistant Director of Health Education

EVERY one is agreed, we think, that the recent conference on "Better Care for Mothers and Babies," held in Raleigh, was a great success. But was it? Judging from the thought-provoking speeches, papers and discussions given, the valuable suggestions and timely remedies offered, as well as the rapt attention of the large and representative audience, it was a tremendous success. But whether six months from now it will be classed as just another conference or remembered as the beginning of a new and better day for mothers and babies in North Carolina remains to be seen. It will depend largely on whether or not health officers, physicians, nurses, clubwomen and citizens of whatever classification took home with them a conviction and probably a pattern by which to start work on their local problems of providing better care for mothers and babies.

Purpose of Conference

The purpose of the conference was to bring together representatives of the State's official, medical, professional and citizens' groups and lay before them the facts underlying one of the State's most urgent health problems—how to save the large number of mothers and babies who die needlessly every year from causes or conditions incident to childbirth—with a view of impressing them with a sense of their responsibility in bringing about a solution to their problem.

A number of very revealing facts were brought out in the discussions of the conference. One was that North Carolina has a baby death rate that is altogether too high—66 per 1,000 live births in 1937 and almost 68 in 1938, as against 54 for the Nation. This means that North Carolina now loses about 1,000 babies every year more than she would lose if she has as low rate as the average for all the States. The State has nearly 80,000 babies born alive each year—about two-thirds white and one-third colored—but more than 5,000 of these babies die annually. Only six States have a higher infant death rate than North Carolina; these are Arizona, Colorado, New Mexico, South Carolina, Texas and Virginia; Louisiana reports the same rate as North Carolina.

Deaths Among Very Young

A significant fact brought out in connection with the State's high infant death rate was that large numbers of babies die when only one day or one week old. In 1937, 1,233 babies died the first day of life, and 2,124 during the first week of life. This means to a great extent that this large number of 3,357 babies were denied their first rights—to be born well and to be given every chance to live. Usually it means that their mothers either neglected themselves during pregnancy or were unable to get the medical and nursing care before and at birth that a baby requires to be born well and get a good start in life.

Another disconcerting fact brought out in the conference was that a North Carolina mother is more than twice as likely to die in pregnancy or childbirth as a mother in Connecticut, or a baby born in North Carolina has only about one-half the chances for living to its first birthday that a baby in New Jersey has.

It is now known that doctors and nurses alone cannot cope with the problem. It is too deep-seated, involving inheritances, conditions and customs that only the schools, churches, clinics, hospitals and all the State and professional agencies working together can reach. As has been pointed out before and reemphasized in the conference, there is one source of power that has not yet been harnessed in behalf of better care for mothers and babies, and yet this is the most natural and logical of all—the woman-power of the State. High health authorities have repeatedly said that when women themselves become interested and demand better care for mothers and babies, then and not until then will they get it. This challenge was forcefully presented to the women attending the conference by Dr. Bayard Carter, of Duke Hospital. He made the statement that women must go after this problem in the same spirit and zeal with which they worked in their missionary societies in other days. "Go and tell," he said, carried the Gospel of salvation to the heathen with results that have astonished believers and transformed nations. "Go and tell" mothers, he said, in ignorant, benighted families, isolated and poverty-ridden homes that they or their babies need not die at childbirth,

must be the method employed if tragic mother and baby deaths are to be stopped. Half-hearted measures and efforts, he declared, will never do it. In conclusion, he said with dramatic force, "We now know what to do, and for God's sake, let's get out and do it."

North Carolina Sets the Stage for a Great National Movement

(Conference for Better Care of Mothers and Babies, as Viewed from the Lay Reporter's Table)

SEVENTY-FOUR North Carolina counties, seven States and the District of Columbia were represented here in the first in the United States of a series of Statewide conferences on Better Care for Mothers and Babies, sponsored by the National Council for Mothers and Babies, in cooperation with the North Carolina State Board of Health.

Sessions, which began in the morning, continued throughout the day, with addresses by a group of distinguished speakers from out of the State and discussions by numerous North Carolinians interested in this work. The presiding officer was Dr. Aldert S. Root, of Raleigh, Chairman of the North Carolina Section of the American Academy of Pediatrics, and the visitors were welcomed to Raleigh by Governor Clyde R. Hoey and Dr. Carl V. Reynolds, State Health Officer.

Governor Hoey expressed his approval of the objectives of the conference and stated he thought it a distinct compliment to North Carolina that the National Council for Mothers and Babies should have chosen this State in which to launch such an important national movement. It was fitting that this should be the case, however, the Governor said, due to the fact that "there are so many children in North Carolina." He expressed the hope that, as the result of the deliberations of the conference, ways and means would be devised to save many mothers and babies.

The purposes of the conference were outlined by Dr. G. M. Cooper, who is in charge of the maternal and child health services for the State Board of Health and who was largely instrumental in making arrangements for the conference. He declared that for forty years public health workers in North Carolina had been conscious of the needless sacrifices reflected in the deaths of mothers and babies, but that progress in "doing something about it" had been slow. He urged the conference members to use the material brought out by taking it back to their respective communities and disseminating it through the proper channels. He emphasized North Carolina's high maternal and infant death rate as an evidence that this service is needed.

A Distinguished Group

Distinguished speakers from outside the State included Dr. Edwin F. Daily, Director of the Maternal and Child Health Division of the United States Children's Bureau, who spoke at the morning session; Mrs. J. K. Pettengill, of Washington, President of the National Congress of Parents and Teachers, who spoke in the afternoon; Dr. J. H. Mason Knox, Director of Maternal and Child Health for the Maryland State Board of Health and a member of the Johns Hopkins School of Public Health Staff, who brought greetings from the National Council for Mothers and

Babies, representing Mrs. Elwood Street, Chairman; Dr. Martha M. Eliot, Assistant Chief of the United States Children's Bureau, and Dr. Fred L. Adair, of Chicago, Chairman of the American Committee on Maternal Welfare, the last three speaking in the evening.

Dr. Knox paid tribute to the North Carolina State Board of Health and, personally, to Dr. Carl V. Reynolds, State Health Officer, and Dr. G. M. Cooper, in charge of maternal and child health activities, declaring that the selection of North Carolina for this important conference, which was the first of a series to be held throughout the country, was a distinct tribute to these.

Expanding Program Sought

Dr. Eliot outlined the provisions of the National Health Program for the promotion of maternal and child health, as recommended to the President by the Interdepartmental Committee to Coordinate Health and Welfare Activities. "As a part of State and local services," she said, "the committee recommended a gradual but steady expansion of the program of maternity care and the care of new-born infants and medical care for children—a program which should reach its maximum proportions by the end of ten years. The plan calls for medical care of mothers and their new-born infants throughout the period of pregnancy and emphasizes the need for care at confinement either by physicians and nurses in the home, or, when necessary, in a hospital." Dr. Eliot went on to point out that the needs in some States are greater than in others, "not only because the proportion of births and children is greater and the death rates of mothers and new-born babies are higher, but because the financial resources of these States are often less than those of other States and their ability to meet the needs is less."

Dr. Eliot's Recommendations

She recommended: Construction of hospitals where needed, provision of medical care for the needy and the medically needy, paid for through public funds derived through taxes, a plan for a more general program of medical care for self-supporting groups in the population, paid for through public funds derived from general taxes or through contributions made on an insurance basis, or through funds from a combination of these sources, and insurance against loss of wages during illness.

During the course of his address, which preceded a summary of the day's events by Dr. F. Bayard Carter, of Duke, Dr. Fred L. Adair stressed the fact that health and education are essentials in a democracy and that it is the duty of the Government to provide both. The health of the individual can't be separated from the public good, he declared. "We know, beyond a doubt," he said, "that there are too many maternal deaths, too many still-births and too many deaths among new-born and young babies." Dr. Adair went on to say that it has been demonstrated these can be reduced below the general level and below the rates prevailing in certain sections. This is a matter, he said, which involves public concern to such an extent that the public treasury should supply the funds not only to provide the necessary service to remedy the matter, but to educate the personnel that is to perform this service.

Dr. Adair is recognized as one of the leading obstetricians in the United States and supervised the making of the picture, "The Birth of a Baby." He left for Chicago by way of Washington, following his address at the night session.

Parent-Teacher Head Speaks

Mrs. Pettengill, the Parent-Teacher Congress President, spoke for the lay

people, she said. She quoted one club woman as saying, with regard to maternal and infant deaths, "Something ought to be done about it." She declared that "we must utilize our clubs, our families, our established groups, so that our strength can be multiplied and reinforced. We must remember the work for mothers and babies involves many types of work—and as we go forward we are strengthening and carrying forward many other aspects of health and social work."

Other North Carolina speakers on the program, who took part in the afternoon discussions, were: Dr. T. W. M. Long, of Roanoke Rapids; Dr. Fred Hale, of Raleigh; Dr. Jane S. McKimmon, of Raleigh; Prof. George Lawrence, of Chapel Hill; Mrs. W. H. Currie, of Carthage; Mrs. Arthur Lee Dozier, of Rocky Mount; Mrs. E. T. Harrison, of High Point; Mrs. Louis B. Goodman, of Wilmington; Mrs. Lewis Raulston, of Greensboro; Miss Mary E. Thomas, of State College; Dr. Walter J. Hughes, of the State Board of Health; Mrs. C. T. Wanzer, of Charlotte, and Mrs. J. Henry Highsmith, of the State Board of Health.

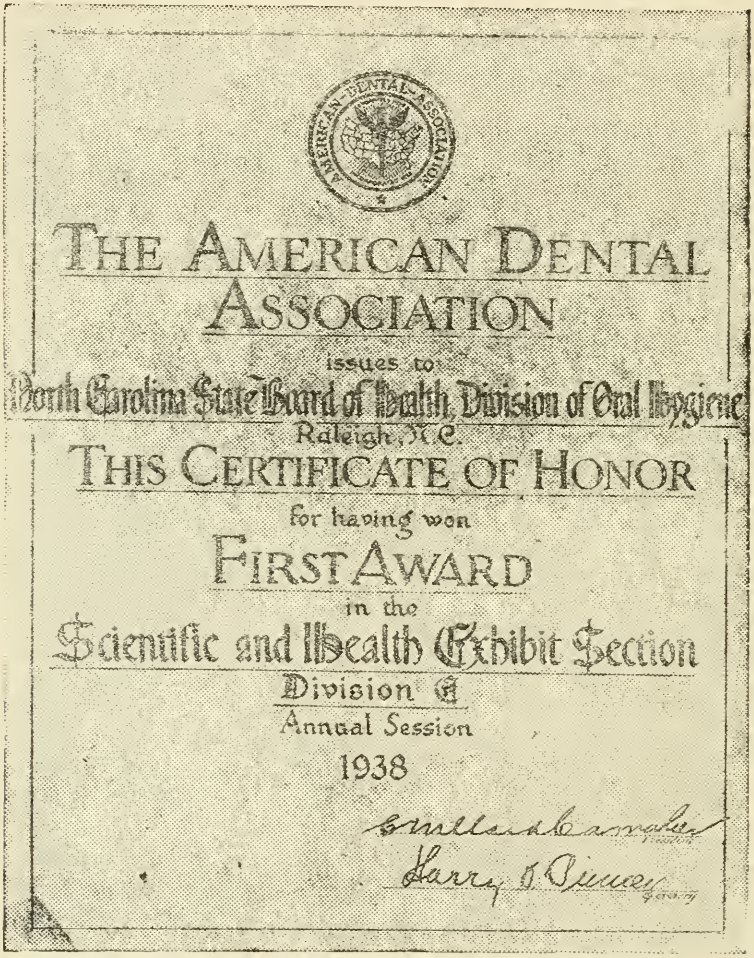
Says Reasons Obvious

"The reasons why a mother in North Carolina is more than twice as likely to die in pregnancy or childbirth than the mother in Connecticut are not obscure, nor are the reasons unknown why an infant born in North Carolina has only about one-half the chance of one born in New Jersey of living until his first birthday," Dr. Daily said, in his address which climaxed the morning session of the conference. He summed up the four principal causes of maternal and infant mortality as illustrated by: The family that does not know that proper medical care during pregnancy and during the first year of a baby's life affords the surest protection; the family that seeks care, but is unable, because of economic or other reasons, to carry out the advice given; the family that realizes the value of proper care, but is unable to obtain it, because of economic or other reasons, and the family that may or may not realize the importance of proper diet, but is unable to obtain the proper food.

Dr. Daily told of some of the things that are being done to overcome these stumbling-blocks, through well-directed and well-financed campaigns in behalf of mothers and babies in various States. His remarks were carefully noted by the public health workers and members of other interested groups present, in order that the information he gave might be disseminated through the proper channels.

Preceding Dr. Daily's remarks, there was a symposium on "Safeguarding the Infant and the Young Child," led by Dr. Root and participated in by Dr. J. Buren Sidbury, of Wilmington; Dr. J. LaBruce Ward, of Asheville, and Dr. Arthur H. London, of Durham. This was followed by a symposium on "Reduction of the Hazards of Childbirth to the Mother and Baby," participated in by Dr. W. Z. Bradford, of Charlotte, who discussed what is known as the Charlotte Plan, and Dr. John Z. Preston, of Tryon, on "The Obstetric Problem in Rural Areas." Informal talks by Dr. M. T. Foster, of Fayetteville, and Dr. W. R. Parker, of Jackson, both health officers, followed.

"ANOTHER FIRST"



To North Carolina has come "another first," this time in the shape of recognition for achievement in the field of Oral Hygiene, as it is related to the State's Public Health Program.

The above is a reproduction of the Certificate of Honor that was awarded to the State Board of Health for honors won by its Division of Oral Hygiene, of which Dr. Ernest A. Branch is the Director, at the last annual convention of the American Dental Association.

The First Award Certificate was presented for an exhibit that was planned by Miss Carolyn Mercer, educational consultant for the Division, and the exhibit was taken to St. Louis, Mo., where the Association met, by Dr. Branch.

Services Rendered North Carolina's Citizens by Local Health Units

By R. E. Fox, M. D., Director, Division of County Health Work

THE protection of the health of the citizens of a State or Nation is recognized as one of the cardinal principles of government; and, by those who have studied the various factors that contribute to man's happiness and success, health is placed at the head of the list, as basic. For what can man enjoy and accomplish as achievements in this present-day world if he does not have a sound mind in a sound body?

It has been said that the civilization of a nation or community could be judged by its sanitation and public health practices, for we find in our less civilized countries the most insanitary practices. The aim of public health is to educate every citizen to utilize the knowledge that medical and sanitary sciences have discovered.

Today in North Carolina *more than eighty-five per cent of our people are provided with some type of full-time organized local public health service, either city, county or district.* Seventy-six of our one hundred counties are cooperating with the State Board of Health in this undertaking, including six cities, which have their departments of public health. Local public health service has been likened unto the infantry in time of war to the general and his staff in battle, for what general could win a battle without his infantry?

Some Essential Services

What are some of the essential services that local health units offer to the citizens of our local communities? It is not the purpose to bore the reader with statistics, but we wonder if you know that, in the last two years in controlling communicable diseases in North Carolina, the personnel of local health departments made one hundred and twelve thousand home visits and this same personnel immunized or vaccinated five hundred and seventy-seven thousand of our citizens against communicable diseases.

All of us have been much interested in the problem of the venereal diseases, and it is interesting to note that within the two-year period, *seventy-eight thousand of our citizens availed themselves of the medical services of local health departments.* These individuals made six hundred and thirty-four thousand visits to this service during the two-year interval!

On the question of tuberculosis control, we note that twenty-four thousand individuals consulted facilities of local health services to determine if they had tuberculosis. In connection with known cases or contacts, our public health nurses made more than forty-six thousand home visits in the last two years.

For Mothers and Babies

We are vitally interested in the mothers of our State, for they are responsible for our citizens of tomorrow. During the last two years *more than fourteen thousand expectant mothers* availed themselves of the medical service of our local health departments. Our public health nurses during this period made forty-six thousand home visits in the interest of these expectant mothers and made return visits of thirty-eight thousand to see mothers following the birth of their babies.

After the baby is born, local health service provides a medical and nurs-

ing service to help our citizens of tomorrow get properly started in life. In the last two years more than twelve thousand children under one year of age were admitted to the medical service and these made more than thirty-one thousand visits to medical conferences. Again, the public health nurses in our local health departments made more than eighty-five thousand visits in the interest of these children under one year of age. It is the aim of local health service to continue to help in carrying these children after they have passed one year of age through the pre-school years and the period when they are in our public school system.

Between the ages of one and six, during the last two years, more than thirty-three thousand children availed themselves of the medical service offered by local health departments. These children paid thirty-seven thousand visits to medical conferences. Again, our public health nurses made home visits totaling thirty-eight thousand in the interest of the pre-school children during the two-year period.

School-Age Protection

When the child enters school, the physicians and nurses are there to see that his health is safeguarded. There are two types of service rendered: First, an inspection; the other an examination by a physician. In the two-year interval, nine hundred and thirty-seven thousand inspections of school children were made by local health department workers. Of this number there were findings to warrant a physical examination by physicians in more than one hundred and seventy-one thousand cases. Again, our public health nurses made visits to homes in the interest of school children totaling seventy-one thousand field visits.

Another service rendered in the schools which has been found to be of such vital importance is the dental service, for here is a service to our school children rendered by dentists of the staff of the State Board of Health working with local health units that keeps, as far as possible, the teeth of our future citizens in a sound condition. Within the past two years these dentists have made inspections of two hundred and forty-three thousand school children and of those unable to go to a local dentist for a correction of dental defects, one hundred and ninety-six thousand have been treated by dentists working with local health departments.

There is no sight that appeals to the human element of our citizenship more than the crippled child. We are all anxious to do what we can for him. Local health services again are available to these children. During the past two years more than eight thousand crippled children were admitted to medical service in clinics. In behalf of these children our public health nurses made thirty-five hundred nursing visits.

As we have said before, the sanitation of a community is a fair index of its civilization. It is interesting to note that within the past two years our local health departments have been instrumental in getting our citizens to install more than four thousand individual water supplies that are adequately safeguarded. During this same interval more than forty-five thousand new privies were installed, and for those homes that were provided with water, more than four thousand new septic tanks.

Sanitary Safeguards

Malaria has been the scourge of many nations. In some communities of our State the citizenry is still afflicted with this disease. Again, our local public health workers are engaged in the control of this disease. Within the last two years more than

seven hundred homes have been mosquito-proofed due to the efforts of local health workers. More than twenty-four hundred mosquito-breeding places have been eliminated, and in those places where it was impossible to eliminate mosquito-breeding by drainage, more than four thousand such places have been treated by representatives of local health departments to control the breeding of mosquitoes.

Another active service of our local public health organizations is the protection of our food and milk supply; for these are vehicles in transmitting disease from one human being to another, as well as from animal to man. Inspectors of local health departments have within the past two years made more than five hundred and seventy-nine thousand inspections of food-handling establishments. More than twenty-nine thousand inspections of dairy farms have been made. The two principal diseases transmitted from the cow to man are tuberculosis and Bangs' disease, or undulant fever. The testing of cows for these diseases is carried on largely by local veterinarians, who may or may not be attached to the staff of local health departments. However, as a result of the stimulus and requirements of our local health departments, more than eighty-six thousand tests for tuberculosis and Bangs' disease were performed within the last two years.

Laboratory Services

Our public health laboratory, either local laboratories or local health departments utilizing the facilities of our State Laboratory of Hygiene, have collected and caused to be examined more than three hundred and ninety thousand specimens to determine the presence or absence of diseases that might be injurious to our citizens.

These do not constitute all of the services performed within the past two years by local health departments, but they are representative of the types of services performed and, I believe, show as an index that the money expended in North Carolina for public health work has not been an unwise expenditure. Our citizens are more public health conscious today than ever before in the history of our State.

The 1939 session of our Legislature has seen the introduction of three bills which would make it mandatory on the part of three of the twenty-four counties not now provided with full-time health service to establish such service for their citizens. These bills were introduced by legislators at the request of interested local citizens. The day is not far distant when other counties will follow these examples. Local health service is a growing institution, as may be seen when we note that the first full-time organized local health service in North Carolina was established in 1911. In 1932 we had local health units serving thirty-six counties, this number having increased by forty within the last six years.

Thirteen to One

One of the largest factors in this increased interest has been the fact that the State Board of Health has had additional funds for carrying on local public health service. Part of these funds were State funds, but by far the greater contribution has been from Federal sources. It is interesting to note that the State of North Carolina is now contributing one dollar in this work to thirteen dollars being expended by local, Federal and other agencies.

Local public health workers met in Raleigh recently and requested of the Legislature additional State funds for carrying on public health work in North Carolina.

North Carolina could well expend

as a minimum one dollar per capita for local health service. In 1937-1938 we were expending approximately forty-two cents per capita. During the current year we are expending forty-seven cents per capita.

As evidence of the value of public health work to the citizens of North Carolina, in closing we are glad to inform you that the general death rate has decreased from an average figure of ten and six-tenths during the five-year period 1929 to 1933 to a figure of even ten for the period 1934 to 1938; and for 1938 we had a general death rate of nine and six-tenths. Expressed differently, this lower rate for the past five years means a saving of two thousand and one hundred lives per year in our State.

Coordination of Public Health and Private Practice in Pediatrics

By J. BUREN SIDBURY, M. D., Wilmington, President of the North Carolina Medical Society

THE Public Health Man and the Pediatrist are probably more vitally concerned in preventive medicine than all the other branches of medicine combined. A good health officer is always awake to the possibility of the spread of disease and is ever alert to prevent disease whenever and wherever possible; whether it is proper drainage to prevent malaria, proper sewerage disposal to prevent typhoid and dysentery or sanitary inspection of dairies to assure pure clean milk for public consumption, or immunization to prevent infectious diseases.

It is the health officer's duty to keep the public informed as to the dangers of epidemics. By radio talks, newspaper articles, health conferences, and talks before civic clubs the public can be kept informed in regard to health matters which will aid in keeping their families well. He should instruct the public as to the advisability and time of administration of such measures as typhoid vaccination, smallpox vaccination, diphtheria and whooping cough and measles immunization. The great danger of having young infants exposed to whooping cough and measles cannot be stressed too often. Parents should be advised that there is a specific prophylactic remedy against measles, but it must be given early within seven days of the exposure, and it should also be stressed that the duration of this immunity is short-lived, from four to six weeks only.

The pediatrician is essentially a practitioner of preventive medicine. He tells each and every mother how she shoud take care of her baby as to diet and health habits; how to keep her baby well and fit to meet the problems that may arise. Specific instructions as to when and what immunization procedures are necessary are as routine for the pediatrist as is weighing, measuring and looking at the throat and ears of each baby examined.

Unfortunately only a relatively small number of babies and children are seen by the pediatrist. To reach this larger number of children and parents the public health man must step in with his propaganda of education by radio, news articles, etc., to keep the public informed as to their responsibility. This team work is very important.

Communicable Diseases

Since infants and children are more

susceptible to communicable diseases than adults, it would naturally follow that the pediatrist is most interested in this group of diseases. He and the health officer know the importance of early recognition and prompt isolation of these diseases. If the first case of measles or whooping cough in any community could be diagnosed early, before exposing other children, and prompt isolation effected, many of our epidemics could be prevented. Much emphasis should be placed on the early recognition and isolation of these diseases.

Neo-Natal Clinics

There were born in North Carolina last year 79,080 infants; 64,566, or more than four-fifths, were born on farms or in towns or small cities; less than one-fourth (14,415) were born in cities of 10,000 or more population. At a glance we may see where prenatal care will yield the greatest returns. It is the earnest desire of our State Health Department and the pediatrists of the State to see established in each county of the State one or more maternity and infant welfare clinics to which shall be assigned an obstetrician and pediatrist as consultants if not regular attendants.

It goes without saying that the nursing personnel of these clinics is of equal importance. The maternity and infant health work must be emphasized more. All pregnant women must be advised of the importance of a medical examination and medical supervision from the beginning of pregnancy—not at the end. They must be impressed with the potential dangers of pregnancy and made to realize the importance of proper medical supervision. Upon the shoulders of the public health nurse will rest the responsibility of putting this information across more than upon any other individual. She should get the proper information across to the expectant mother and should see that regular attendance to the doctor's office or clinic is kept up.

These clinics could be sponsored jointly by the County Medical Society and local Board of Health. The doctors in attendance at the clinic could be designated by the County Society. A reasonable fee for holding these clinics should be paid the physicians. More doctors would become interested in prenatal care, more people would become informed on this subject and more expectant mothers would avail themselves of this service.

Parent-Teachers, School-Health Officer and Pediatrist

The summer round-up conducted by the Parent-Teachers, the local health officer, dentist and physician has become a potent factor in promoting health in the pre-school child. Its objective is to see to it that, as nearly as possible, every child who enters school for the first time shall be free from physical defects.

In 1937 the following summary was reported by the North Carolina Congress of Parents and Teachers:

Number pre-school examinations, 4,271.

Number defects discovered, 4,284; number corrected, 1,452.

Children not protected against smallpox, 2,978; subsequently protected, 1,955.

Children not protected against diphtheria, 2,128; subsequently protected, 868.

Children referred to physician, 1,748; number consulting physician, 567.

Children referred to dentist, 1,599; number consulting dentist, 651.

Many schools in North Carolina, with assistance of the local health officer and physicians, annually give tests for tuberculosis and diphtheria. The results of these tests are sent to the parents with instructions to consult their family physicians. Some four or five years ago the "repeaters" in two large schools in New Han-

over County were examined. Stool examinations were made and it was found from this study that some 25 to 30 per cent of these "repeaters" had intestinal parasites, as hookworm or tapeworm. The parents were advised and proper treatment was given.

Twenty-five years ago the infant death rate in North Carolina and the United States registration area was 120 per 1,000 live births. In 1937 the rate was 66 for North Carolina, the rate for the United States registration area was 54. This reduction in infant death rate has occurred between the ages of one and twelve months. The mortality rate for the first month has remained essentially the same. During the past twenty-five years many advances have been made in health education and preventive medicine. Hand in hand with these advances has developed that branch of medicine known as pediatrics. Preventive medicine has been practiced more by the pediatrist than by any other branch of medicine and it is with a certain amount of pardonable pride that I claim for pediatrics some credit.

In 1927 there were 6,588 infant deaths under one year of age in North Carolina. Of this number 1,279 occurred before the infant was one day old; 2,393, or 36.3 per cent of the total, occurred before the infant was one week old. The infant mortality rate for 1937 for the State was 65.5. In 1937 there were 5,180 infant deaths under one year of age in North Carolina. Of this number 1,233 occurred before the infant was one day old; 2,124, or 41 per cent of the total, occurred before the infant was one week old.

The coordinated efforts of the public health and pediatrist has made its imprint on the lowered death rate from one month to one year. A more determined effort must be made to lower the death rate in the first month, and especially the first week of life. To accomplish this we must have the united efforts of the public health, the obstetrician, general practitioner and the pediatrist. The pediatrists stand ready to join hands in this coordinated campaign.

The job of taking care of the sick and the prevention of illness is too big for any one group. The coordinated efforts of all branches of medicine are necessary for the accomplishment of our goal. The public health man must approach the problem from the standpoint of the health needs of the community as a whole. The pediatrists may be considered as his lieutenants who carry more specific tasks to their conclusion. One cannot accomplish the most returns without the whole-hearted cooperation and support of the other. Here it may well be said—"In union there is strength." "United we stand, divided we fall."

Look Out for "332!"

A warning against the use of shaving brushes labeled "Imperial, Sterilized, Japan, 332," of which more than 35,000 have been received in the United States and sold or distributed here, is contained in a letter received by Dr. Carl V. Reynolds, North Carolina State Health Officer, from Dr. Thomas Parran, Surgeon-General and Head of the United States Public Health Service.

This action is the result of a case of anthrax traced to one of such Japanese shaving brushes, and is designed to prevent the spread of this disease through their further use. No mention was made of Japanese manufactured hair brushes or tooth brushes in Dr. Parran's notice.

"Examination of this shaving brush," said Dr. Parran's notice, referring to that from which a case of

anthrax is supposed to have been transmitted, "as well as a number of other shaving brushes bearing the same trade mark has resulted in the isolation of anthrax bacilli from all the brushes so far examined in several laboratories."

Such brushes, Dr. Parran pointed out, have been sold in a number of States, frequently in variety stores, for ten cents apiece. It is asked that the State Health Departments cooperate in getting this information before the people.

"Food for Thought"

"No people can be hardy, no people can think straight or govern wisely whose minds and bodies have been warped in childhood by malnutrition. From a strictly economic viewpoint, it is cheaper to feed our school children a proper lunch diet than to provide medical care when their undernourished bodies fall prey to pellagra, rickets, anemia and other diseases resulting from inadequate foods."—Dr. Louise Stanley, Chief, United States Bureau of Home Economics.

THE VITAMINS

G. HOWARD SATTERFIELD, Professor of Biochemistry, North Carolina State College, Raleigh, N. C.

NAME	Deficiency In Diet Produces	Destroyed by	FOUND IN
Vitamin A	Xerophthalmia: Night blindness, respiratory infections, poor appetite, stunted growth, physical weakness, diarrhea.	Sunlight, prolonged heat in presence of air. Not destroyed by ordinary cooking.	Fish liver oils, egg yolk, butter, whole milk, cream, cheese. Green leafy vegetables like turnip tops, spinach, lettuce, water cress, broccoli. Associated with yellow color in plants, carrots, yellow corn, tomatoes, oranges, peaches, bananas, prunes.
Vitamin B[1] or B_1	Beriberi: Impaired appetite and digestion, stunted growth, fatigue, sub-normal temperature.	Heat in the presence of baking soda. Not destroyed by ordinary cooking.	Dried brewer's yeast, whole cereals, dried seed like beans and peas. Tomatoes, turnip greens, oranges. Egg yolk, milk, cheese, liver. Meats are poor sources. Butter, none.
Vitamin C[2]	Scurvy: Loss of appetite, loss of weight, tooth decay, sore mouth, fatigue, sallow complexion.	Most easily destroyed vitamin. Cooking with soda. Heat in presence of air. Light.	Citrus fruits, tomatoes, strawberries, pineapple. Fresh green leaves—lettuce, cabbage, celery, turnip greens, spinach. Potatoes, turnips. Canning usually reduces the quantity of Vitamin C. Milk variable. Butter, eggs, meats, none.
Vitamin D	Rickets: Soft bones, poor teeth, muscular weakness, improper calcium and phosphorus utilization.	Not easily destroyed. Not destroyed by ordinary cooking.	Most foods lacking. Fish liver oils, egg yolk, salmon, caviar. Formed by direct exposure of body to sunshine. Butter and milk variable. Now being added to several foods.
Vitamin E	No proof that human needs this vitamin. Suspect abortion.	Not easily destroyed. Not destroyed by ordinary cooking.	Wheat germ oil, lettuce, most vegetable oils, whole cereals, green leaves, meat.
Vitamin P-P[3]	Pellagra. Black tongue in dogs.	Not easily destroyed. Not destroyed by ordinary cooking.	Dried brewer's yeast, lean meat, liver, salmon haddock, milk, tomatoes, turnip greens, English peas.

1–Vitamin B is also known as Thiamine and Aneurin.
2–Vitamin C is also known as Ascorbic Acid and Cevitamic Acid.
3–Vitamin P-P is also known as Nicotinic Acid. It is a part of what was once known as B_2 or G.
A number of other vitamins are known but their significance in human nutrition has not been demonstrated.

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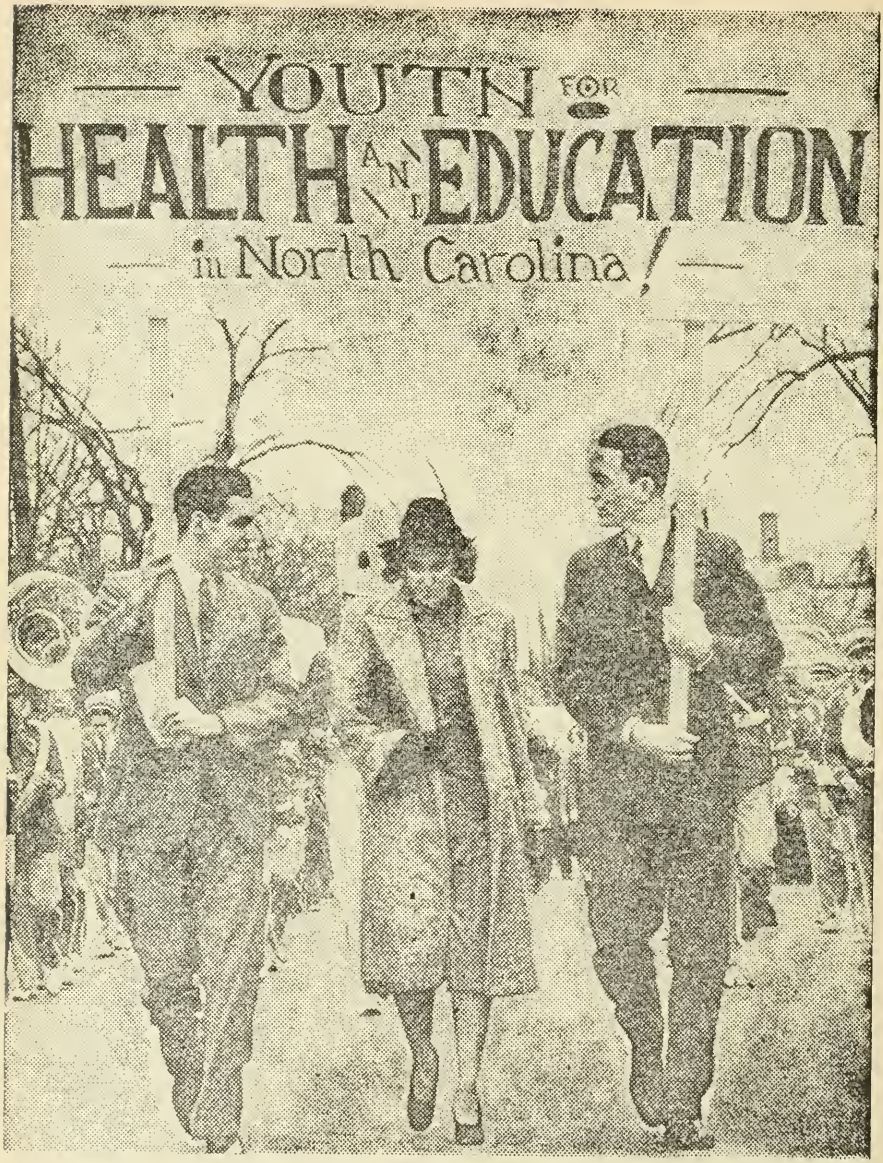
Youth Wants "Sound Minds in Sound Bodies"



—Courtesy Raleigh News and Observer.

Youth Expresses Itself

Presidents of the student bodies of the three units comprising the Greater University of North Carolina led a parade in Raleigh recently which demonstrated how the hundreds of marchers taking part felt about curtailed appropriations for public health and education in North Carolina, as the picture above will show, at first glance. Besides the big banner, carried by the three Presidents at the head of the procession, there were numerous placards, declaring, among other things, that "Health is Cheap at the Price." Warnings against syphilis and other infectious communicable and controllable diseases were printed and displayed, as were pleas for more support for higher education. The band from the University of North Carolina at Chapel Hill furnished lively music for the parade. Numerous speeches were made in support of youth's contention for the right to develop "sound minds in sound bodies," and strong resolutions were passed and sent to the General Assembly.

The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

This Bulletin will be sent free to any citizen of the State upon request

Entered as second-class matter at Postoffice at Raleigh, N. C., under Act of July 16, 1894.
Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

Vol. 54 MAY, 1939 No. 5

OUR MAY DAY BABY

We are proud of our front cover this month. For many years the front cover of our May issue has been notable for the beautiful illustrations of North Carolina babies. This year we present a member of our own Board of Health family. Her name is Nancy Stimpson, fourteen months old daughter of Dr. and Mrs. R. T. Stimpson, of Raleigh. Any reader will agree that we have never published a prettier or healthier specimen of babyhood. Dr. Stimpson is head of our Vital Statistics Division. As keeper of the records of the births of all the babies born in the State annually, what more appropriate selection could we have made?

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils
Appendicitis
Cancer
Constipation
Chickenpox
Diabetes
Diphtheria
Don't Spit Placards
Eyes
Flies
Fly Placards
German Measles
Health Education
Hookworm Disease
Infantile Paralysis
Influenza
Malaria
Measles
Pellagra
Residential Sewage Disposal Plants
Sanitary Privies
Scarlet Fever
Smallpox
Teeth
Tuberculosis
Tuberculosis Placards
Typhoid Fever
Typhoid Placards
Venereal Diseases
Vitamins
Water Supplies
Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care
Prenatal Letters (series of nine monthly letters)
The Expectant Mother
Breast Feeding
Infant Care. The Prevention of Infantile Diarrhea.
Table of Heights and Weights
Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Instructions for North Carolina Midwives.

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THE Health Bulletin
PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. 54 MAY, 1939 No. 5

Notes and Comment

By THE EDITOR

THE Editor would like to call attention this month to the information contained in various tables relating to health conditions affecting mothers and babies published in this issue. The most encouraging aspect in the situation this year is the fact that an increasing number of health officers, a larger number of practicing physicians and an increasingly large number of competent public health nurses are becoming more definitely interested in the practical work for mothers and babies than ever before. Health Centers, or clinics, if they must be so designated, for both expectant mothers and well babies are being established and extended in new areas throughout the State. This will eventually mean effective service in communities now badly needing such a program. It must be on a permanent basis and a long-time plan.

* * * *

Last year we received two or three copies of the annual report issued by local health departments. The reports from the Edgecombe County Health Department, the Orange-Person-Chatham District and the Wilmington and New Hanover County Health Department were all excellently printed and contained a mass of most interesting information. This year we have already received reports from the Orange-Person-Chatham Department, with an even finer and more interesting report than last year, also from the Edgecombe-Greene Health Department, which is an excellent and highly interesting report. Also received by the Editor up to now is a report from the Currituck-Dare-Hyde-Tyrrell-Washington Health Department, with an attractively bound mimeographed report, also containing a mass of useful information. No one in the State could better understand the amount of work and creative thinking necessary to formulate these excellent reports. For a long time the report from New Hanover County and Wilmington has been a feature of health work in the State. It is hoped that in the near future every full-time county and city health organization in the State will issue an annual report and provide this desk with a copy. Carried out systematically as the New Hanover Health Department has done through the years, it would comprise a mass of information which would be highly useful to the coming generation.

* * * *

The district health officer for the Bertie-Chowan District reports to us that there were 513 colored babies born in Bertie County in 1938. Of this number 490 of the mothers were given prenatal service in the health center, in the health office, and in their homes. He reports also that of 420 white babies born in Bertie and Chowan Counties during 1937, 339, or 81 per cent, of those babies were immunized against diphtheria before

the end of 1938. This is a good record of work.

* * * *

As we go to the printer for the May issue, it is too early to procure a certified copy of the new physical examination law necessary to procure marriage license, or the law requiring blood tests for all expectant mothers. We will therefore publish in the June issue copies of the aforementioned laws, together with the law requiring immunization against diphtheria of all babies born in the State.

* * * *

In this our annual maternity and infancy issue, we can publish nothing of more human interest than the following letter, which needs no further editorial comment from this writer. The name and county, of course, are omitted:

"Four years ago I had the harrowing, heartbreaking experience of seeing my mother's only sister die, in the eighth month of pregnancy, from the effects of a lack of prenatal care.

"She was the wife of a farmer of the great middle class, a homeowner trying to pay off the mortgage. This is too hard on mothers bearing children.

"This dear aunt of mine was intelligent enough that she usually consulted a physician soon after she became pregnant and remained under his care until the birth of her baby, but having been blessed wonderfully to give birth to eight children, she thought that she was strong enough and knew enough to get by. She would save the money it would take to pay a physician and get some of the necessities for the increasing family of growing children. But, alas! Her blood had become too low, and while attending a case of pneumonia in the home, she contracted the disease, and having no resistance, died four days later.

"The sight of her dying makes me want to help teach mothers that they had better not neglect their own health and jeopardize their lives for the sake of paying debts.

"Another thing, I wish I could lift part of the burden from the shoulders of poor over-burdened mothers.

"I am a young girl just graduated from a business college and entering a business career, and nothing could make me happier than to help avert the death of mothers from the lack of prenatal care."

Maternal and Infant Health

Some of the Conditions Which Seriously Affect the Health and Lives of Mothers and Babies

ELSEWHERE in this issue is a table setting forth in parallel columns the number of deaths from important causes, together with the rate as figured by statisticians. The latter affords an easier comparison of the figures. One column gives the number and the rate of deaths occurring in 1937 and the other that for 1938. The things which are of most concern in this article are those affecting the mothers and babies. Two questions should be settled in the beginning.

First, what is meant by maternal mortality? The answer is that any condition which produces death of a pregnant woman as a direct or indirect cause of her condition of pregnancy is known as a maternal death, whether it occurs in childbirth, before or after, during the postpartum period.

Second, what is meant by infant mortality? The answer is the death of a baby under one year of age.

In 1937 there were 432 maternal deaths, in 1938 there were 449 maternal deaths. In 1937 there were 5,234 infant deaths, in 1938 there were 5,474 infant deaths. Therefore, the maternal death rate per 1,000

live births in 1938 was a little higher and also a little higher for infants. In 1937 there were 80,644 births, in 1938 there were 80,603. Therefore, the conclusion must be reached that there was not a sufficient difference in the number of births to account for the slight rise in the number of deaths. The trend is discouraging. It is earnestly hoped that the present year will see a decided break in this trend for the better.

In order that the people of the State may keep constantly before them the problems which must be solved before these conditions are eliminated, it is necessary to present information in these columns from time to time, setting forth briefly an analysis of conditions which are present and operating all the time to the detriment of the mothers and the infants.

Midwives. Within the past twenty years the number of midwives in North Carolina has been reduced from about 9,000, which were located and known to be working twenty years ago, to certainly less than 3,000 at present. There have been more efforts directed toward the improvement of the work of midwives in most parts of the State in recent years than ever before. Many have died from old age and other causes and fewer younger women, both among the white women and the Negro women, have taken up the work of midwifery. The problem in the immediate future is to further reduce the number of midwives at work and to provide a better trained and better controlled and better equipped class of midwives than ever before.

The high infant and maternal mortality rate, however, cannot be attributed altogether to midwives. In order that health officers, physicians, nurses and public-spirited people throughout the State may see at a glance just what the midwives are doing, the table immediately following and covering a nine-year period, from 1929 to 1937, inclusive, will provide such information.

Births Delivered by Physicians		Births Delivered by Midwives
	1929	
47,047 (white)		6,219 (white)
7,617 (colored)		15,775 (colored)
232 (Indian)		274 (Indian)
	1930	
47,133 (white)		6,382 (white)
7,225 (colored)		15,456 (colored)
246 (Indian)		275 (Indian)
	1931	
44,898 (white)		6,908 (white)
6,367 (colored)		15,993 (colored)
244 (Indian)		333 (Indian)
	1932	
45,537 (white)		8,118 (white)
6,084 (colored)		17,518 (colored)
219 (Indian)		404 (Indian)
	1933	
43,878 (white)		7,612 (white)
6,276 (colored)		16,989 (colored)
255 (Indian)		312 (Indian)
	1934	
47,667 (white)		6,771 (white)
7,635 (colored)		16,797 (colored)
346 (Indian)		340 (Indian)
	1935	
47,795 (white)		6,404 (white)
8,168 (colored)		16,474 (colored)
362 (Indian)		393 (Indian)
	1936	
46,435 (white)		5,973 (white)
7,571 (colored)		15,647 (colored)
366 (Indian)		329 (Indian)
	1937	
48,219 (white)		5,638 (white)
8,698 (colored)		15,880 (colored)
442 (Indian)		367 (Indian)

It will be seen from a study of the foregoing table how very little the work of physicians and midwives has varied during these nine years. During the same period there was a material reduction in both the maternal and the infant death rate of the State. This reduction was reflected as much in the work of midwives as in the work of physicians. The conclusion, therefore, must be that the work with midwives and the improvement in their services has kept pace with the better service rendered by physicians during the period.

The statement made in these col-

umns several years ago may be repeated, and that is this: When we consider the large rural population in North Carolina and the great number of people who live many miles from the nearest physicians, it seems rather remarkable that such a large percentage of the births are delivered by physicians.

Lack of Prenatal Care. Many of the deaths of mothers which could be prevented result from what is called the toxemias of pregnancy. Careful medical supervision during all the nine months previous to the birth of the baby would serve to prevent a majority of such deaths. It would not be much trouble to the physician or to the patient for a careful medical examination to be made at least once a month during the first six or seven months and in cases needing it, on a weekly basis thereafter. Such medical examinations and advice would be useless, however, unless the patient should be in position to carry out the physician's recommendations.

Furthermore, the physician would have to be interested and do a thorough examination and use all his persuasive powers to impress upon the patient and her husband the necessity for this service.

Competent Obstetric Service at Birth. As the tables above show, there are annually about 16,000 Negro women and around 6,000 white women who depend entirely upon midwives. If the midwives are thoroughly trained, if the patient has been under the supervision of a physician and the surroundings of the home are not too sordid, the woman has a reasonable chance to go through with a normal delivery without disaster to herself or to the child. There are too many instances in which all of these favorable circumstances are lacking.

One practical way of settling this problem would be to have a public hospital in every county of the State of sufficient capacity to take care of all indigent deliveries of both white and colored women when the prenatal service shows the least danger to the patient or the slightest variation in prospect for a normal delivery. At present, a large number of counties have no hospital whatever within their borders, and in most of the other counties, the facilities are crowded and lacking.

Another serious problem is the lack of money to enable the hospital to take care of such patients.

Borderline Births. By the expression borderline births, reference is made to the rather large number of women who are attended by physicians at childbirth, but who do not have any prenatal attention and in which the physician is engaged too near the time of the expected delivery for him to have much responsibility for preventing many of the accidents of childbirth. There is no way to estimate accurately the number of such women, but from careful observation and inquiry over a period of years, there must be at least 10,000 of such women annually, and among such cases are found the largest proportion of casualties both to mothers and babies. The practicing physicians of the State are in position to do more about remedying this situation than anyone else. They can do it by making their services so valuable and by their kindly interest to the patients they serve and by superior professional service that such families will demand and pay for attendance by such physicians.

Bedside Nursing Lacking. An experiment, or rather a demonstration, is now being conducted in Northampton County in an effort to provide competent, well-trained public health nurses to attend every midwife case in that county with the

midwives. The nurse is of course a consultant and is primarily responsible for seeing that the woman has proper prenatal medical service, proper care at the time of birth, and for the postpartum attendance. If this service can be provided without too great expense, it is hoped that the plan will spread to every other county, and if it does, a sufficient number of properly trained nurses working in the public health department would be able to cut the death rate for mothers and babies among the indigent women in half, at least.

Poverty and Ignorance. These twin devils which cause probably more deaths among mothers and babies than anything else is a condition which to control or to bring within reasonable limitations will require the combined efforts of the whole economical, educational and public health system of the State. It is often impossible to decide whether ignorance causes poverty or poverty causes ignorance. The result, however, is always the same. Such people live in the ramshackle houses that are not fit to house domestic animals. They have inadequate food, they are frequently disease-ridden, tuberculosis and venereal diseases being prevalent in all too many such families. Probably from several generations of such existence they cannot be blamed too much for the don't-care and indifferent attitude which makes them the despair of all public health workers. Better housing and increase in income, steady employment for those who will work at anything, and more practical education for the children will reduce these hazards as time goes on, if the leaders of the State do their full duty by them.

Safety in the Home

By H. F. EASOM, M. D., Director Division of Industrial Hygiene

HEADLINES appearing in a local paper recently read as follows: "Three Are Dead From Explosion. Starting Fire With Kerosene Costs Lives of Negro and Two Children." A Negro mother, impatient because the fire was slow in starting, dashed kerosene on the stove. The resultant explosion covered her two children, who were standing nearby, and herself with flames.

Home is ordinarily thought of as a safe place. Yet, we are told that in one year 38,500 people were killed by accident in their homes and that 170,000 were permanently maimed and crippled. Most of these could have been prevented.

Young children and old people comprise the largest group of home accident victims. About half of the fatalities are caused by falls and about 60 per cent of these are among old people sixty-five years and over. Elderly people are less agile, their vision more likely to be impaired, their bones more easily broken and their vitality lower. A child may get up from a fall and go on with his play, while an old person might suffer a fractured hip from a similar accident.

Home falls occur most frequently on steps and stairways that are poorly lighted, in need of repair, or cluttered with objects such as toys, household utensils and clothing. Stairways and steps should be adequately lighted, in good repair and clear at all times. Definite space should be designated for keeping toys, household utensils and the like, and each member of the family trained to place them there after use.

Falls also occur from high places, such as porches, balconies and windows, and from chairs, boxes and other objects used in place of a ladder. Porches and balconies should have secure railings. In each home there should be a sturdy stepladder, which should be sufficiently small and light to permit its being easily moved and set up.

Falls frequently occur on slippery or smooth surfaces, such as the bath tub or shower, grease or liquid spots on the floor, highly polished floors and on icy walks. A rubber mat should be used in the bath tub or shower. Anything spilled on the floor should be mopped up without delay. Ashes, sand or salt should be scattered on icy walks. Small rugs should be anchored and should not be used at all at the top or bottom of the stairs.

Falls may be caused by tripping over objects left carelessly lying around, such as skates, tools, tricycles, etc.

Burns and scalds probably rank next to falls as a cause of home accidents. Children are frequent victims. Playing with matches or fire, falling in an open fire or into a bucket of hot liquid or against a hot stove or radiator, pulling pans or kettles of hot liquids off the stove or table are some of the causes. Safety matches should be used and kept in a metal container out of reach of small children. Open fireplaces should be properly screened. Turn the handles of pans away from the edge of the table or stove. Tubs or buckets of hot liquids should be kept off the floor.

Using kerosene or gasoline to hasten fires has cost many lives and much loss of property. Likewise, the use of highly inflammable cleaning fluids is dangerous. Cleaning with such fluids should be done outdoors or in a room with all windows open and no flame nearby. There are approved non-inflammable cleaning fluids on the market, and, even though they do usually cost more than gasoline or naphtha, the safety with which they may be used justifies the difference in purchase price.

Poisoning is responsible for another group of home accidents. The natural curiosity of children leads them to taste anything within their reach. Many medicines, although not poisonous in proper doses, are harmful when taken in larger quantities. All medicines should be properly labeled and kept well out of reach of children. If poisonous materials, such as insecticides, must be kept in the home, they should carry poison labels and be kept in a place separate from the medicines and out of reach of children.

Children frequently aspirate or swallow small objects, such as safety pins, marbles and coins. This may cause death or serious damage to the lungs or gastro-intestinal tract. Such objects should be kept out of the small child's reach, and larger children should be cautioned against putting things in their mouths. In cases where there is doubt as to whether the child has actually swallowed or aspirated a foreign body, it is best to consult a physician anyway. Delay in doing so may result in serious complications.

Faulty gas and electric appliances and carelessness in their use have resulted in much loss of life and property. Only standard gas appliances should be selected, and these should be installed by competent workmen and should be properly inspected if at any time they do not seem to be working properly. Because of the danger of carbon monoxide poisoning, all gas heaters should be provided with flues to the outside and should not be kept burning in a room where persons are sleeping. Most

of the fatal home accidents from electricity occur in the bathroom. Even a low voltage, which under ordinary conditions would cause only a slight shock, may cause death when the hands and body are wet. Anyone who attempts to adjust an electric heater, turn on the light or operate driers or other electric appliances while he is in the tub or while his body is wet, runs the risk of being electrocuted. In the interest of safety it is well to use porcelain sockets and attach short lengths of cord to the brass pull-chains on all bathroom lights.

I have not attempted to discuss all the causes of home accidents nor to bring you any new and startling facts concerning them. Although most of us are already aware of these dangers, we are likely to become careless unless we are reminded of them occasionally. Just a little more thought given to the elimination of these hazards in your own home may prevent much suffering and even save a life.

The Obstetric Problem in Rural Areas

By JOHN PRESTON, M. D., Tryon, N. C.

Address delivered at the Statewide Conference on Better Care for Mothers and Babies, Raleigh, N. C., February 15, 1939

TRYON has a population of less than 2,000, but is about four times larger than any other town in Polk County. Someone has already said that the rural areas were in the country and in towns under 10,000, so we are certainly rural. Polk County is divided by a paved highway that runs from Tryon to Rutherfordton. On one side are mountains and on the other lies the upper Piedmont farming country. Hendersonville is eight miles north and Spartanburg, S. C., about twenty miles south of the county lines, both easily accessible by paved highways. Each of these towns has a good general hospital capable of doing modern hospital obstetrics. With a few exceptions, these persons having a satisfactory income can be, and are, delivered in these hospitals. Therefore, my first observation of the problems of rural obstetrics is the economic one.

Those people who live on the mountainous side of the Tryon-Rutherfordton highway are for the most part poorer than those on the other side, because of the inferior farm lands found on mountain slopes and narrow ravines. The only doctor practicing in Polk County, except in Tryon, lives in the heart of the better farming country and does most of the obstetrics there. My observations and opinions therefore are based on practice in a very poor rural area. In this area about one out of twenty families, or 5 per cent, can afford a hospital and doctor's bill. Of the other nineteen conservatively not over four can afford a doctor's bill. That produces the amazing figure of 75 per cent who financially are unable to pay for medical attention for a delivery.

It is said that money is the root of all evil. The lack of money produces these immediate obstetrical evils: (1) The women hesitate to consult doctors for prenatal advice; (2) they are overworked and frequently poorly fed; (3) all too frequently they are ignorant and do not recognize complications developing in themselves; (4) they rely on a neighbor woman to deliver them; (5) they wait until they are in labor to send for a doctor, who frequently finds

the baby born before his arrival; (6) their homes and labor beds are unbelieveably unsterile. There are no screens and usually no lights. In other words, these pregnant women make little or no preparation for their delivery—either in engaging a doctor, keeping their bodies in health, or in preparing their delivery room.

In the summer of 1936 I was called to a home at night to see a woman who was "sick." When I asked the man on the other end of the telephone what the trouble seemed to be, he only knew that she had a pain in the stomach. When I arrived with my obstetrical equipment I found the typical Polk County obstetrical case. A young woman, edematous and pale, lying in bed in active labor. As I examined her abdomen and noted the pains I obtained the story of mild pre-eclampsia. When I asked the mother why someone had not brought the girl to a doctor or to the Pea Ridge clinic, she retorted that she herself had had seven babies without a doctor, and that she always had some swelling of her feet and headaches, too. Having determined that delivery was imminent, I proceeded to set up in a dirty room my sterile table beside the bed. A lamp was put beside the instruments, gauze, etc., and immediately flies, routed from the ceiling, descended in buzzing swarms to crawl over the table. I recovered the instruments slightly too late. A few minutes later a cat jumped on the table, but was promptly slapped off, taking, unintentionally, one sterile towel and a neat stack of sterile gauze. Someone, though, promptly dove for the gauze and swept the pieces up and gingerly laid them back on the table. I was licked, utterly licked. She delivered with a little chloroform analgesia perfectly normally. I finally got back to the car and shivered, partly from the cold air and partly from the numb fear of almost certain infection. On the way home I realized that most of my cases had been very much like that—some not so bad, some worse. It made me angry, first at my own poor technique, and then at the people who called me at the very last moment to deliver poor physical risks under horrible septic conditions. That girl's delivery by having a doctor was in no way better than any of her mother's probably had been. Her prenatal care was nil and her delivery a farce from the sterile technique viewpoint. She got along quite well, but her next pregnancy was a supervised one at the Pea Ridge clinic.

The greatest problem in rural obstetrics is educational. It is extremely difficult to persuade young women to have regular routine prenatal examinations. If it is the first pregnancy they usually consult their mother, who gives them the advice she was given by her mother. In the outlying districts, until recently, I believe that most pregnancies and labors were supervised by midwives. Medical examinations were not thought necessary, and even if desired might be indefinitely postponed. In the case of multiparas, if the preceding pregnancies had been normal they do not feel the necessity to consult a doctor unless there is something radically wrong. I have been impressed by the number of women who consider edema of legs, weakness, headaches or swelling of the face and hands as a more or less natural condition associated with pregnancy.

In June 1938 a postoperative caesarean, who had been brought to the hospital from South Carolina after several hours of convulsions and coma, was asked why she had not consulted a doctor during several weeks that she had had the signs

and symptoms of pre-eclampsia. Her retort was that she had and that he had told her that all women got swollen and dizzy during the eighth month. That may not have been true, but there is a great deal of education to be given to some of our own profession, not because they do not know, but because they are busy and become careless.

But the problem of education is not such a great one. Since 1931 the American Women's Hospital has provided a nurse in Polk County, part of whose duty has been to encourage prenatal and pediatric care. The results have been most gratifying. With the State Board of Health's cooperation the American Women's Hospital organized three prenatal clinics, located one in Tryon and the other two in the rural sections. We have not set the pregnant women afire, but there has been a marked change in the attitude already. Quite often a woman comes in to see one of the private doctors and prefaces her consultation by saying that her neighbor or relative went to one of the clinics and got along so well that she herself wants to be examined and treated during her pregnancy. There is nothing that goes so fast as gossip, good or bad. And if a community has a well-run prenatal clinic, it is only a matter of a few months before every woman in the community knows about it. Not all that are pregnant are going to attend, but believe me they are going to be mighty interested in what results that clinic has; and are going to, despite prejudice, custom or social or financial status, begin to think of their condition during pregnancy. The day is not far distant when the great majority of women in Polk County, and I hope in North Carolina, will have satisfactory prenatal care as a result of the clinics.

We have a great advantage in the cooperation of the hospital in Tryon. Any woman who attends the clinics knows that if she develops a serious complication she will be hospitalized. For that reason, in considering the problem of rural obstetrics I have omitted medical or surgical complications.

There is one other major problem which is the result of the other two. That is that there are not enough doctors who are willing to do rural or home deliveries, and that the midwives are not properly supervised. In our county we badly need two or three good midwives, and so far we have been able to secure only one. She is no prize-winner either.

The question has often arisen in my mind: Why don't nurses become midwives? Of course the answer must be that they could not make a satisfactory living. If we had several midwives who could deliver the normal cases and those who could not pay a doctor's fee, our clinics would be more satisfactory. And by the way, we are going to have to face the delivery problem very soon in our section. The tendency to hospital deliveries is making doctors less and less anxious to do home obstetrics. The old granny-woman seems to be disappearing. The birth rate is increasing. One of two solutions seems obvious to me. Either better trained midwives, preferably nurses, or more maternity shelters or hospital beds. We have rather exhaustively gone into the question of a shelter or lying-in hospital for our rural area and the estimated cost per patient would be ridiculously high. The answer for the present is better trained and better supervised midwives. One other advantage we offer to our clinic patients is that if they have any complications in labor the midwife may call the doctor who attends the clinic. One doctor could supervise

several competent midwives and single-handed take care of the calls for help. At the same time he would not spend so much time doing routine deliveries.

If these are the major problems in obstetrics in rural areas, we may well congratulate ourselves and North Carolina. For the economic question could be settled by our maternity and infant clinics and a good midwife, whose fee should be much lower than a doctor's. The educational problem is rapidly being solved by our nurses and the clinics they run. The scarcity of rural doctors who wish to do obstetrics can be overcome by the maternity and infant clinics and competent midwives under their supervision.

NORTH CAROLINA BUREAU OF VITAL STATISTICS
PROVISIONAL REPORT FOR 1938

	1938	1937
Total number deaths	33,765	34,100
Death rate	9.6	9.8
Total number births	80,603	80,644
Birth rate	22.8	23.1
Infant deaths (under one year)	5,474	5,234
*Infant mortality rate	67.9	64.9
Maternal deaths	449	432
*Maternal mortality rate	5.6	5.4

	Number	Rate	Number	Rate
Typhoid and paratyphoid fever	71	2.0	79	2.3
Endemic typhus fever	5	0.1	7	0.2
Undulant fever	2	0.06	3	0.09
Smallpox	0		1	0.03
Measles	246	7.0	40	1.1
Scarlet fever	21	0.6	17	0.5
Whooping cough	266	7.5	171	4.9
Diphtheria	180	5.1	166	4.8
Influenza	496	14.1	878	25.1
Acute poliomyelitis and polioencephalitis	10	0.3	20	0.6
Epidemic cerebrospinal meningitis	33	0.9	41	1.2
Rabies	1	0.03	1	0.03
Tetanus	38	1.1	21	0.6
Tuberculosis, pulmonary	1,723	48.9	1,732	49.6
Tuberculosis, other forms	153	4.3	156	4.5
Syphilis, locomotor ataxia, paresis	450	12.8	432	12.4
Malaria	78	2.2	95	2.7
Cancer, all forms	1,907	54.1	1,890	54.1
Diabetes mellitus	382	10.8	383	11.0
Pellagra	256	7.3	327	9.4
Pneumonia, all forms	2,739	77.7	2,945	84.3
Diarrhea and enteritis (under 2 years)	1,031	29.2	861	24.7
Appendicitis	308	8.7	329	9.4
*Puerperal septicemia	98	5.6	84	5.4
*Puerperal, other forms	351		348	
Suicide	335	9.5	312	8.9
Homicide	344	9.8	372	10.7

PREVENTABLE ACCIDENTS

Automobile accidents, primary	846	24.0	1,008	28.9
Automobile and railroad collisions	31	0.9	35	1.0
Other railroad accidents	94	2.7	98	2.8
Air transportation accidents	8	0.2	7	0.2
Accidental drowning	120	3.4	153	4.4
Conflagration and accidental burns	237	6.7	244	7.0
Accidental traumatism by firearms	93	2.6	88	2.5

January 24, 1939. All figures provisional.

*—Infant and maternal rates (per 1,000 live births).

LIVE BIRTHS, INFANT MORTALITY AND MATERNAL MORTALITY
UNITED STATES, 1937

STATE	LIVE BIRTHS		INFANT MORTALITY (Deaths in the First Year of Life)		MATERNAL MORTALITY (Deaths Assigned to Pregnancy and Childbirth)	
	Number	Rate Per 1,000 Population*	Number	Rate Per 1,000 Live Births	Number	Rate Per 1,000 Live Births
United States	2,203,337	17 0	119,931	54	10,769	4.9
Alabama	61,611	21.3	3,844	62	390	6.3
Arizona	10,494	25.5	1,267	121	57	5.4
Arkansas	35,236	17.2	1,919	54	240	6.8
California	94,230	15.3	5,070	54	385	4.1
Colorado	19,610	18.3	1,441	73	105	5.4
Connecticut	22,774	13.1	921	40	58	2.5
Delaware	4,355	16.7	278	64	17	3.9
District of Columbia	12,343	19.7	751	61	71	5.8
Florida	29,507	17.7	1,765	60	200	6.8
Georgia	64,061	20.8	3,952	62	472	7.4
Idaho	10,369	21.0	453	44	47	4.5
Illinois	115,282	14.6	4,967	43	450	3.9
Indiana	56,087	16.1	2,789	50	195	3.5
Iowa	42,105	16.5	1,862	44	190	4.5
Kansas	29,325	15.7	1,302	44	127	4.3
Kentucky	56,163	19.2	3,321	59	263	4.7
Louisiana	46,006	21.6	3,020	66	330	7.2
Maine	15,246	17.8	996	65	100	6.6
Maryland	27,739	16.5	1,705	61	117	4.2
Massachusetts	61,736	13.9	2,723	44	286	4.6
Michigan	91,539	19.0	4,386	48	334	3.6
Minnesota	48,036	18.1	1,961	41	148	3.1
Mississippi	52,095	25.8	3,066	59	368	7.1
Missouri	56,951	14.3	3,219	57	293	5.1
Montana	10,248	19.0	518	51	38	3.7
Nebraska	22,270	16.3	937	42	92	4.1
Nevada	1,742	17.2	70	40	16	9.2
New Hampshire	7,633	15.0	367	48	34	4.5
New Jersey	54,607	12.6	2,154	39	207	3.8
New Mexico	13,837	32.8	1,711	124	69	5.0
New York	185,502	14.3	8,369	45	749	4.0
North Carolina	79,080	22.6	5,180	66	429	5.4
North Dakota	12,637	17.9	662	52	59	4.7
Ohio	107,576	16.0	5,332	50	496	4.6
Oklahoma	41,456	16.3	2,345	57	214	5.2
Oregon	15,457	15 1	642	42	62	4.0
Pennsylvania	161,288	15.8	8,109	50	776	4.8
Rhode Island	10,240	15.0	487	48	39	3.8
South Carolina	40,643	21.7	3,074	76	313	7.7
South Dakota	11,908	17.2	608	51	48	4.0
Tennessee	51,938	18.0	3,171	61	319	6.1
Texas	116,057	18.8	8,575	74	666	5.7
Utah	12,693	24.5	526	41	42	3.3
Vermont	6,326	16.5	313	49	36	5.7
Virginia	51,950	19.2	3,619	70	283	5.4
Washington	25,036	15.1	998	40	114	4.6
West Virginia	42,240	22.6	2,610	62	213	5.0
Wisconsin	53,543	18.3	2,324	43	195	3.6
Wyoming	4,530	19.3	252	56	17	3.8

*—Estimated as of July 1, 1937.

Source: Reports of the U. S. Bureau of the Census.

(7911)
CHILDREN'S BUREAU,
U. S. Department of Labor.

A Sojourn in the Hospital

IT so happened recently that the Editor of this household organ was forced to spend a few days in the hospital. He is so happy that he was able to leave through the same entrance by which he entered that he wants his friends among the readers of the *Health Bulletin* to know about it. There are several reasons for this statement, one is that he is the kind of a fellow who likes to share his joys with other people. And if getting into a hospital these days for a series of the various examinations to which a patient is subjected and getting out none the worse for the experience is not cause for rejoicing, it would be hard to find a suitable subject for joy. Another reason is, as stated so many times before in these columns, an effort is always made to publish helpful information. Right here let it be stated that those of the *Bulletin's* readers who have had similar experience in recent months or years may pass this sketch over. It would not interest them in the least and might bring up certain things which they prefer to forget. So the chief reason is to encourage those of our readers who have reached middle age and beyond and who may find themselves abruptly moved off from home to hospital, may be assured that after all, the experience is not as bad as it might be. It is also felt that knowing a little about what may be expected may serve to disarm any apprehensions they might have in advance. So just a little description about what is to be expected under similar circumstances, it is felt, would be in accordance with the policies of this publication as expressed above and would come in the category, to repeat, of helpful information.

It all came about in this way. Just before the big statewide Conference here in Raleigh on February 15th, the Editor had not only plenty to do, but somehow he contracted a very bad head cold, or so he thought. Anyhow, he failed to practice what he is always preaching to other folks in going to bed and receiving proper medical attention until recovery was assured. He proceeded to be smart and worked right on. After the Conference was all over and the so-called bad cold seemed to be better, for some reason he did not feel any better. The fact is, he began to feel worse. One afternoon he had to close his desk and go home and go to bed, which he ought to have done about two weeks before. After staying in bed two or three days, during which time he was smart again in trying to be his own doctor and failing to get any better, but on the other hand he got decidedly worse, Mrs. C. decided it was time to take a hand. So she called Dr. Haywood out and he soon said, "O, yes, you have had a case of influenza and you must stay in bed awhile until you get better." That was advice at the time, however, which was not needed. He was so sick he could not get out of bed. The disagreeable first part of this experience may be passed over very rapidly because he prefers to forget it as promptly as possible, but for about seven days he continued to get sicker and sicker. There were many hours during this experience when it seemed that death would be a relief.

About the time he felt the most wretched and miserable, he looked out the window one afternoon and saw a funeral party assembled at one of the neighbors' houses. Mrs. C. informed him that a very beloved old neighbor, one of the few men in the neighborhood older than he was, had died and they were having his funeral. This was not encouraging at all. After about seven days of this experience, which Dr. Haywood very properly termed some of the complications following influenza, it was decided, that is by Dr. Haywood and Mrs. C. in a consultation, that the hospital would be the best place for the time-being. Considerable examination was thought would be necessary, X-ray work, etc. After about two days' effort by getting the application in in time, a vacant room at Rex Hospital was obtained. They said bring him out about six o'clock in the evening. That is after supper time at the hospital. That meant nothing, because the old man could not eat.

For several days at home, while feel-

ing too wretched to read and too sick to try to listen to any talk, he had spent a good part of his conscious moments counting the blossoms on the wallpaper. When they got him in the bed at the hospital, the walls were white and there were no blossoms to count, so that neurosis could not exercise itself. The next best view from the particular room to which he was assigned was the entrance in the back of the hospital where the undertakers' helpers back up occasionally with the long basket. That was not a pleasant view at all. So there was nothing left to do between groans but contemplate the unfinished work at the office as well as the many items of personal affairs that needed attention. Now and then one of the nurses in that division would come around and inquire of any especial needs. The temperature was taken frequently and by that time the interne had come around for case history, all of which were understood to be routine and really helped by way of diversion.

The last item for the evening was instruction to the nurse in charge that the patient should have no breakfast. This was as it should be, because, as aforementioned, he was not eating anything anyway, because he could not.

Bright and early the next morning, Miss Arey, the highly efficient technician at Rex Hospital, came around with her classic tray of instruments, etc., and so began the seige in earnest. Blood was obtained from the fiingertips and more blood from the arm, all of which was interesting, but knowing too much about such things he could not help but speculate on what was going to be the result. When this job was finished, the wheel chair was rolled in and it was stated that the patient was due in the X-ray room.

From here on, the patient of middle age or beyond should listen closely. In the X-ray room Dr. Noble was all ready. The patient was ordered to stand up in a frame-work of metal, etc., which simply had him cornered. Dr. Noble sat down in front, jammed the plate close up to the patient's middle extremity and the sparks began to fly and the room got dark and the blue lights and the other kind of lights flashed on. Miss Arey was right at hand with a large glass of about a pint of a white brackish-tasting mineral, which there is no need to name here, as it was a familiar chemical to the old man and the layman would not know the difference. Anyhow, he was ordered to drink. Think of it, a fellow who had been in bed at that time about eight days unable even to drink soup or orange juice most of the time. He began drinking, however, while Dr. Noble fastened his gaze on the proper place. After drinking what seemed to be about a quart, the doctor says you must drink it faster and drink more of it. On emptying the first container, Miss Arey was very quickly back with another one. But the patient got through. This process had to be repeated two or three times on separate days, more blood counts were made, different poses under the X-ray had to be obtained, then there had to be some test meals and more fasting before the X-ray and blood work was completed. Then the grand finale came when Dr. Haywood ordered a gastric analysis. By the time that stage was reached, the patient's friends had heard about his predicament and were coming to inquire about him, all of which was highly appreciated. Some phoned, some sent flowers, some sent up their cards. Every such movement was like a beam of sunlight from the outside world.

Now, in modern medical language, a gastric analysis simply means that the patient must swallow a tube about twelve inches in length with a gadget on the end which makes the patient feel as if he is swallowing the handle of a knife or something of that kind. This gadget must remain in the stomach about two or three hours. The period during which this process goes on, varied at about fifteen-minute intervals by the nurse or the technician coming around to do something, gives a fellow time to contemplate most of his past life. Right in the middle of this process, one of the Editor's good friends. Dr. B. A. Hocutt, of Clayton, and his wife, called to see how he was getting along and the nurse told him he (the patient) would be glad to see him. That was the real honest-to-goodness truth, but the old man was not in position right then to

show really how much he appreciated it. So it is hoped that Dr. Hocutt will see these lines and be convinced that the visit of himself and Mrs. Hocutt was warmly welcomed. It just simply was not a time and a place to carry on much conversation. Finally, Doctors Haywood and Noble and the various technicians and consultants decided that the patient was getting better and that he probably might go home in a day or two if he would agree to take it easy. That is a promise that was more enthusiastically made than any the Editor remembers having made in a good long time.

The conclusion and the summary of this whole experience is, after all, to urge the reader to take the Editor's advice and do like he should have done himself, but did not, and that is, when so-called bad colds, or more especially influenza, makes a personal attack, surrender right in the start, as that is the time to take it easy.

Another tip we would like to give to any patient going to a hospital is to make up his mind to be as considerate as he can of the doctors and the nurses. He thinks he is having to pay a big price for hospital service, but if he would only stop to figure on just what he is getting in a hospital as compared to what a hotel gives him, he will realize that most hospitals are conducted on bargain-price principles. The service as provided costs the hospital management a great deal of money, and this service cannot be provided unless the money is forthcoming from somewhere. The Editor found the service at the new Rex Hospital superb in every way. They need an addition of at least one hundred rooms and some more equipment and money enough to provide an additional number of nurses. Those on duty have to work very hard. At times during certain hours they have a very hard time in meeting the many calls which are demanded. Private-duty nursing comes high and but very few people, comparatively speaking, can afford such a luxury. The Editor realizes that the trend in hospital charges is upward when it ought to be downward. It is probable that in the near future the Government, Federal, State and local, will have to make greater tax provision for hospital construction and maintenance in order to bring within the level of the income of the average family the availability of hospital service. It is to be earnestly hoped that such a movement may gain momentum at an early date.

North Carolina Library Commission Books

An exhibit of books and pamphlets at the Raleigh Conference on Better Care of Mothers and Babies was arranged by the North Carolina Library Commission. A bibliography which was prepared by the American Library Association and the National Council for Mothers and Babies may be secured for the asking. The books displayed and other technical books may be borrowed through your local library or from the North Carolina Library Commission in Raleigh. The only charge is postage. Material is loaned for three weeks and may be renewed for a similar period.

Book Review

"HOW TO CONQUER CONSTIPATION," by J. F. Montague, M. D. —J. B. Lippincott Company, Philadelphia—Price $1.50.

In more than twenty years' experience answering correspondence in personal hygiene service for the State Board of Health, the reviewer has noted more requests for information and literature on the subject of constipation than of any other subject. He has also been convinced of the large amount of misleading information, much of which is harmful and dangerous, which is so thoroughly disseminated among the people.

In this book, Dr. Montague has written in an easy reading manner. Much of the book is in a kind of question and answer form. An example of this may be illustrated by quoting one or two of the chapter headings. For instance, this one: "Is a Fallen Stomach Very Dangerous?" Another one: "Is It True the Savages Are Never Constipated?"

He pays his respects to castor oil, which is in full accord with the opinion and experience of the Editor of this publication. For the person who really wants some information which will be helpful, the reviewer does not hesitate to recommend this book.

The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

This Bulletin will be sent free to any citizen of the State upon request

Entered as second-class matter at Postoffice at Raleigh, N. C., under Act of July 16, 1894. Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

Vol. 54 JUNE, 1939 No. 6

HOME OF THE LATE DR. THOMAS F. WOOD, FIRST STATE HEALTH OFFICER, WILMINGTON, N. C.

The above is a photograph of the home of Dr. Wood, taken about 1886. The house still stands with only slight remodeling, at the corner of Chestnut and Second Streets, Wilmington. In this building Dr. Wood lived with his family and carried on the work of the State Board of Health from soon after its creation February 12, 1877, until his death August 22, 1892. Here was issued the first copy of the Health Bulletin, April, 1886. In this group are shown Dr. and Mrs. Wood with their three small children, Misses Jane D. and Margaret Wood, still living here, and Edward Jenner. The latter became a distinguished physician and scientist until his untimely death in 1928.

MEMBERS OF THE NORTH CAROLINA STATE BOARD OF HEALTH

Executive Staff

FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils
Appendicitis
Cancer
Constipation
Chickenpox
Diabetes
Diphtheria
Don't Spit Placards
Eyes
Flies
Fly Placards
German Measles
Health Education
Hookworm Disease
Infantile Paralysis
Influenza
Malaria
Measles
Pellagra
Residential Sewage Disposal Plants
Sanitary Privies
Scarlet Fever
Smallpox
Teeth
Tuberculosis
Tuberculosis Placards
Typhoid Fever
Typhoid Placards
Venereal Diseases
Vitamins
Water Supplies
Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care
Prenatal Letters (series of nine monthly letters)
The Expectant Mother
Breast Feeding
Infant Care. The Prevention of Infantile Diarrhea.
Table of Heights and Weights
Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Instructions for North Carolina Midwives.

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THE Health Bulletin
PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

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Notes and Comment

By THE EDITOR

ON the front cover this month, we are publishing a picture of the old Dr. Thomas Fanning Wood residence, 201 Chestnut Street, Wilmington, North Carolina, where the State Board of Health office was first set up and operated for many years, and where the first issue of the Health Bulletin was published. That issue was April, 1886, 53 years ago. This picture was intended for the April issue of the Health Bulletin as an anniversary number, but illness of the editor prevented its appearing at that time.

As stated once or twice before in these columns, the Health Bulletin was founded by Dr. Wood while Secretary of the State Board of Health and issued regularly month by month from the office of the Board of Health which was his private office in Wilmington. The publication continued regularly until his death in August, 1892.

Not long ago, the editor had the privilege of visiting in the home where Dr. Wood's two daughters, Misses Jane and Margaret Wood still live. They showed the editor the very room from which the Bulletin was issued through the years, from April, 1886 until his death in August, 1892. They informed the editor that Dr. Wood had associated with him a young physician at that time by the name of Dr. Robert Jewett who assisted him in doing some of the writing and the routine work of the office. They said that Dr. Jewett was still living in retirement at his home on Greenville Sound in New Hanover County. On May 6, the Associated Press announced from Wilmington that Dr. Jewett had died that morning at the age of 79.

As stated above, the Health Bulletin was founded by Dr. Wood and his advisers among the membership of the State Board of Health. With just a few alterations, the size and general appearance of the publication is the same today as it was the first issue. It is slightly larger and about twenty years ago, the present management of the Health Bulletin made some improvements in the title page and in page 3, which has been carried as changed ever since.

Dr. Wood was made Secretary and the first State Health Officer following the creation of the State Board of Health by the Legislature in 1877. Dr. Wood was at that time practicing medicine in Wilmington. He was coming to be a botanist of national reputation which he carried on as a hobby. He had also founded and conducted for several years up to that time the North Carolina Medical Journal, now known as Southern Medicine and Surgery and published in Charlotte. Sometime af-

ter Dr. Wood's death, Dr. Jewett obtained control of the North Carolina Medical Journal and owned and published it for some four or five years, when it was sold to Dr. Dickson Register, a native of Duplin County who was practicing medicine in Charlotte and coming to be at that time a widely known physician. At Dr. Wood's death, however, Dr. R. H. Lewis of Raleigh succeeded him as Secretary and State Health Officer and immediately moved the office of the State Board of Health from Wilmington to Raleigh. The Bulletin has been issued monthly from Raleigh ever since. Dr. Wood and Dr. Lewis were both, of course, part time State Health Officers. The two of them combined served for more than thirty years in the office.

The first announcement of the publication of the Health Bulletin was made at the Conjoint Session of the North Carolina State Board of Health and the North Carolina State Medical Society at New Bern on May 20, 1886. Dr. J. W. Jones of Tarboro was president of the North Carolina State Board of Health and in his annual report to the Conjoint Session made the official announcement of the founding of the Health Bulletin in the following language quoted from the transactions of the North Carolina State Medical Society for that year. The record of the Health Bulletin for the following fifty years must accord to Dr. Jones a place as a major prophet. But with what sacrifice in time and labor only a few men know!

Dr. Jones: "Gentlemen of the Medical Society and the State Board of Health: From time to time and little by little, we have gotten the ports of the North Carolina Board of Health together. We occupy it. It is in motion . . . .

"The North Carolina Board of Health, organized and equipped in all its departments (a part time State Health Officer, a part time stenographer, and a total annual appropriation of $2,000!—Editor), with a monthly Bulletin of Health, through which we may communicate, correspond, and instruct, unites in Conjoint Session with the North Carolina Medical Society, to exchange views and propose plans that shall best advance our common work of making our people healthier, happier, wealthier and wiser . . . .

"The first issue of the 'Bulletin' of the North Carolina Board of Health is before you. We consider it a necessity to successful work of the Board and the best means of getting and giving information. It is a medium of communication with our Governors, Legislature, the people, the doctors and sanitary workers all over the world. (The editor received today as these lines are written, a communication from the Health Minister of Poland about a matter appearing in the April issue of the Health Bulletin, 53 years to a day after Dr. Jones' words as quoted above were uttered in the Conjoint Session in New Bern). It will go out as a monthly messenger of glad tidings, with healing in its wings, with words of truth and notes of cheer, or sounds of alarm if danger comes nigh."

Since the above courageous words of Dr. Jones and the persistent efforts through discouraging years of Doctors Wood and Lewis and others of their associates, the Health Bulletin has had many ups and downs but with the inspiration of such founders and the building of so solid a foundation the determination to carry high the candle comes to every worker in the public health field throughout the state today.

* * * *

In this issue we are privileged to publish a paper presented by Dr. A. S. Root, a pediatrician of Raleigh, to the North Carolina Parent-Teacher Association at Raleigh on April 13. Dr. Root's subject was THE PRE-SCHOOL CHILD. This is an excellent presentation, not only in the way of a summary of the work being done throughout the State centering around the Parent-Teacher organization and carried on with the aid of the health officers and the physicians, but also an urgent appeal to everyone concerned to make the summer round up of children more completely successful than ever before. Dr. Root points out that 27 years ago as a young physician just licensed to practice, that he was employed by the school board of Raleigh for three years to inaugurate modern medical inspection of school children in this section. Dr. Root modeled his work on that which was being so successfully done at Philadelphia while he was a student there. Dr. Walter S. Cornell, who founded that work in Philadelphia and who has written a textbook on the subject which this department followed more than twenty years ago in inaugurating school inspection throughout the State, was probably the inspiration for Dr. Root's interest.

It is something of a coincidence that just thirty years ago the writer of these lines became interested as a part time physician in school inspection work and undertook to organize the forces in his home county for such work. He came to Raleigh and joined the staff of the State Board of Health just a few years later on for the chief purpose of carrying through his ideals throughout the State according to the slogan: "Find the defective children and get them treated."

If the reader who is interested in this work will look up the Health Bulletin for September, 1933, he will find considerable description given concerning the work of the state nurses and the system inaugurated throughout the State back in those earlier years. Other issues of the Health Bulletin from time to time, notably the large 64-page issue of April, 1922, carries in detail a description of these efforts on a statewide basis.

The idea and the words "summer round up" were in force in about half the counties of this State under the direction of the State Board of Health at least three or four years before even the national organization of parents and teachers was perfected. The Parent-Teacher organization, however, has been the means of consolidating the forces necessary to success and affording the means of carrying out the plans. It is a great organization and should mean that within a few years every community in the State could have the machinery for sending to school for the first time children free from preventable defects.

There is no better place to note here again that the first physician to be actively concerned about these matters of which there is any written record was Dr. Richard H. Lewis. It will be recalled that the first special pamphlet issued by the North Carolina State Board of Health was on the subject of care of the eyes and ears. This was written by Dr. Lewis and first presented to the North Carolina Medical Society in 1885. It was published as a special pamphlet in April, 1886, and sent out at the same time that the first issue of the Health Bulletin was distributed. The State Medical Society met in New Bern, as noted above, and on May 20, 1886, we quote the following: "Dr. Lewis read a paper on the care of the eyes

and ears of children." It was an exhaustive paper and was extremely interesting to those present. At the conclusion of Dr. Lewis' paper, Dr. Haigh of Fayetteville thanked Dr. Lewis for his "very useful and practical paper, and especially that part referring to school children." He (Dr. Haigh) thought "of all the oppressed classes in our community school children are the worst abused, and it would be a good plan to place this paper in the hands of every school teacher in the State."

Dr. George Thomas of Wilmington added his thanks as follows: "Our friend has the happiest faculty of discussing technical subjects in a plain way of any person I ever knew. The directions embodied in the paper for the proper lighting of school houses are of the first importance, and should be sent to principals of all private schools and to the public school committees throughout the State."

As noted above, that paper with some modifications comprised the first special pamphlet ever issued by the State Board of Health. It will be noted that this was some six years before Dr. Lewis became State Health Officer himself. It is a pertinent fact that today the question of school house lighting and other phases discussed by Dr. Lewis in that paper are just as troublesome as they were then and it sometimes seems to us just about as far from solution.

* * * *

In this issue we are publishing the exact text of three important laws enacted by the last Legislature. First, An Act to Prevent Diphtheria, requiring diphtheria immunization of children; second, An Act to Require Physical Examination Before Issuance of License to Marry; and, third, An Act to Further the Prevention of Syphilis in Unborn Children in North Carolina by requiring a blood test examination of prospective mothers.

It will be advisable for all of our readers to read these laws in detail and therefore to be familiar with the text of the law and ready to aid in the reasonable and practical execution of these important laws.

* * * *

One of the readers of the Health Bulletin at Winston-Salem has written and requested that we publish in an early issue an article about high blood pressure giving such information as we can about its causes, its effects, and something of the diet for people suffering high blood pressure. During the last ten years we have published at least two or three articles by competent physicians on the subject. There is so much yet that is not well understood by the medical profession on the general subject of blood pressure that we beg our correspondent to excuse us from a further discussion at this time. The doctors could or should keep up with the discoveries and latest studies on the subject through their medical Journals and the laymen should depend on their physicians for necessary and practical information including diet on the subject. In short, the soundest advice we can give in these columns for persons suffering from too high or too low blood pressure is to "see your doctor."

* * * *

One of our valued readers in Eastern North Carolina has written us as follows:

"I have absolutely nothing to do with this, it's not my business to interfere, but when I see mothers giving their one and one-half year old babies coca-cola out of the bottle, I want to yell, stop it, but of course I can't. Now, can't the Health Bulletin do it? You yourself can with an article, and start off with—'my at-

tention has been called to the fact'—. It is a shame. North Carolina needs citizens that are worth while. Fifty years from now, she'll be in great need of such. Her standard is lowering every day. You can't say it's ignorance, what is it?

"Now this is none of by business, I know, but this is my state, I was born and married in North Carolina, and I live in North Carolina. You understand."

Our comment on the above is, we do understand, and as we have repeatedly stated in these columns, no parent should be guilty of giving anything except pure boiled water or safe milk or approved food to any baby under three years of age.

The Preschool Child*

By ALBERT S. ROOT, M. D., Raleigh

I WISH to congratulate the Parent-Teacher Congress upon having selected as their main objective the better health of the preschool child. I can assure you that I appreciate very keenly the problems related to this age group, for my first work in Raleigh was in connection with school children, chiefly those of the first grades.

Having studied medical inspection of schools as carried out in Philadelphia when I was a student at the University of Pennsylvania, I proposed to the Raleigh School Board a similar plan for the Raleigh public school children 27 years ago. The Board endorsed the plan and for three years this was my work here. How often then I wished that the preschool child could have been "repaired" so to speak before having entered school and how often I wished that through follow-up work more of the physical defects which I found, could have been corrected! It has remained for the Parent-Teacher Congress to do this, not only in Raleigh but throughout the whole United States. It might be well to consider briefly the preschool child.

The preschool age represents the transition from baby-hood to that period of adjustment to environment and to other individuals which gradually adapts him to fulfilling his function in life.

Infancy is the period of most rapid growth, whereas the preschool age is the period of the most rapid mental development.

The growth of the preschool child is relatively slow, the average gain during the third, fourth and fifth year being only 12 to 16 pounds, and the increase in height only 8 to 10 inches. Growth during this period is apt to take place in spurts, alternating with periods of but little growth. At this age the peculiarities of body build become apparent, the chest grows more in the transverse diameter and becomes less barrel shaped, the abdomen less prominent, the muscles and bones grow for increased strength and coordination. This age denotes too an increase in stabilization of the nervous system. The farther the child gets along in the preschool age the more perfectly he masters his accomplishments and initiates new ones.

It has been said that the preschool age is the neglected age of childhood. This is not literally true but there are certain facts which suggest it. From birth to 2 years of age he has been under the constant supervision of his mother or nurse and has been examined every month or two by his physician. He has been weighed

regularly and the feeding formula changed as needed. He has received the proper vitamins; has been immunized against diphtheria, smallpox and possibly whooping cough, and his routine has been regularly carried out. If he has had the proper supervision, he has been graduated into the preschool age physically fit in every way. At this time he has reached the runabout age and month by month is becoming more and more independent. As a general rule the greater his independence the less the health supervision. He does not often become sick because the preschool age is a healthy age. Consequently he does not have even an occasional check over by his doctor. All too often faulty food and health habits are formed, as for instance, eating between meals, especially candy, going to bed late and having no rest periods. As a result of this lack of health supervision just as many physical defects will be found in these children at your Spring "round-up" this year as were found 20 years ago. Their average physical condition however will be better.

The common physical abnormalities encountered are:

(1) Defective vision.

(2) Enlarged tonsils and adenoids, or diseased tonsils.

(3) Decayed teeth.

(4) Undernutrition.

Two other conditions which should be especially mentioned are tuberculosis and orthopedic defects. If our recent marriage law is enforced hereditary syphilis will not be a problem.

Defective Vision: There are approximately 30,000,000 children in the public, private, and parochial schools of the country. About 10% of these are in need of eye help. The percentage of preschool children having defective vision is practically the same as in school children. The defects, however, are more pronounced in the school child in the higher grades than in the preschool child.

Symptoms of defective vision: (1) inattention, (2) nervousness, (3) headache, (4) holding the book too far or too near, (5) frowning, (6) letters running into each other, (7) backwardness, and a low I. Q. rating.

It is important to remember that it takes longer to see with poor than with good light and consequently children with defective vision are greatly helped by proper illuminating of the school room. School nurses and school teachers should know the code of school lighting, which information may be obtained from the National Society for the Prevention of Blindness.

Enlarged tonsils and adenoids when not in any way interfering with the child's growth and development should not be removed. The tendency for tonsillar and adenoid tissue is to get smaller as time goes on. But when they do interfere with health by causing obstruction to breathing then removal is imperative if normal growth and development is to be hoped for. They are often responsible for a narrow funnel chest or the "adenoid facies" or for susceptibility to respiratory infections, for undernutrition and at times deafness. Between 10% and 15% of children of this age group will show tonsils and adenoids or both which are pathological to the extent of interfering with their health. Diseased tonsils may be detected by gently squeezing the tonsils with forceps and expressing pus from them. Chronically inflamed anterior cervical glands suggest their presence. Undernutrition and secondary anaema are always a part of the picture. This diseased tissue should be promptly removed.

Decayed teeth: 85% of children of the preschool age have decayed teeth. The causes are probably deficient calcium absorption either through a diet not containing milk or the calcium in the milk not being absorbed, due to lack of sufficient vitamins A. and D. Another cause is thought to be the excessive ingestion of sweets, especially candy. Keeping the teeth clean by properly brushing them and the local application of silver nitrate solution to the cavities will do much, in conjunction with a proper and well regulated diet, to prevent further decay.

Undernutrition may be caused by any of the conditions described above, especially abnormal tonsils or adenoids, or both, or by faulty food and health habits. Overfatigue due to inadequate rest or sleep or to a younger or weaker child attempting to keep up in his physical activities with an older or stronger one frequently accounts for the undernourished child. Therefore the treatment of these children as guaged by the weight for age and height is far more comprehensive than the mere removal of a physical defect.

May I urge you parents and teachers in your work with the preschool child to be constantly mindful of the undernourished child. If no physical defect can be found to account for his undernutrition at the Spring round-up examination, see to it that with the aid of your doctor the home environment and faulty health habits are improved, if this be possible. Here is an opportunity for real altruistic help.

Tuberculosis is occasionally found in these children. Less than 5% of preschool children will show a positive tuberculin test. Where the test is positive a flouroscopic examination of the chest should be made in order to be sure that no active tuberculosis exists. If this examination is negative one need not worry about a positive skin test. Only 1½% of children showing a positive tuberculin test will be found to have tuberculosis.

Orthopedic defects such as lameness from infantile paralysis, congenital club foot or spinal curvature should receive treatment as soon as possible. The rehabilitation of these young children through orthopedic procedures is truly remarkable. The government, through the Social Security Act, provides funds for the surgical treatment and care for those who cannot afford to pay for it.

Time will permit only this brief discussion of the more common physical defects found in the preschool child.

In conclusion may I comment upon the splendid work you are doing as shown in last year's report of the N. C. Congress of Parents and Teachers.

The fact that 60% of children entering school last year were gotten together by you and underwent physical examination, including tuberculin tests with flouroscopic examination when indicated by a positive skin test, speaks more eloquently for your energy and enthusiasm than any individual could.

The physicians who made these examinations must come in too for their share of praise. And of all physical defects found in the Spring examinations 30% were corrected through the Summer. This was certainly a creditable showing—practically one third of physical defects found were corrected, and this is the average for the country at large.

But I am wondering if the accomplishments during the Summer has kept pace with the task which you performed in the Spring when you collected these thousands of children together and arranged the de-

tails for their examination. I am wondering if you are getting the best interest during the Summer months upon your large investment in the Spring. I would not for a moment detract from your great work but I wonder if through persistent and tenacious effort you could not be the means of preparing more of these children for the problems which they must help to solve in a troubled world.

*Read at the N. C. Parent-Teacher Congress, Raleigh, April 13, 1939.

An Act To Prevent Diphtheria Requiring Diphtheria Immunization of Children

The General Assembly of North Carolina do enact:

Section 1. The parent or parents or guardian of any child in North Carolina shall have administered to such child between the ages of six months and twelve months an immunizing dose of a prophylactic diphtheria agent which meets the standard approved by the United States Public Health Service for such biologic products.

Sec. 2. The parent or parents or guardian of any child in North Carolina between the ages of twelve months and five years who has not been previously immunized against diphtheria, shall have administered to such child an immunizing dose of prophylactic diphtheria agent which meets the standard approved by the United States Public Health Service for such biologic products.

Sec. 3. (a). It shall be incumbent upon the parent or parents or guardian of such child to present said child to a regularly licensed physician in the State of North Carolina, of his or her or their own choice, and request said physician to render this professional service. If the said parent or parents or guardian of such child are unable to pay for the services of a private physician of his or her or their own choice, they shall then present such child to the County Health Officer in the county in which such child resides and ask that an immunizing dose of prophylactic diphtheria agent which meets the standard approved by the United States Public Health Service for such biologic products, be administered, and such County Health Officer shall administer such treatment.

(b). If there is no regularly employed Health Officer in the given county in which the indigent parent or parents or guardian referred to in Section three (a) resides, the parent or parents or guardian of the indigent child shall present such child to the County physician, who shall then administer the prophylactic diphtheria agent or secure the services of another regularly licensed physician in such county and pay such physician for such services to the said indigent child out of such funds of said county as are provided for such purposes.

Sec. 4. A certificate giving the name and address of the parent, parents or guardian, the name and age of the child and the date of the administration of the prophylactic agent, shall be submitted by the physician rendering this professional service to the local Health Officer, and in instances where there is no Health Officer, said certificate shall be submitted to the County Physician. Such certificate shall be kept on file as a permanent record by the local County

Registrar for births. Furthermore, such certificate of immunization shall be presented to school authorities upon admission to any public, private or parochial school in North Carolina.

Sec. 5. Any willful violation of this Act, or any part thereof, shall constitute a misdemeanor and shall be punishable at law by a fine of not more than fifty dollars ($50.00) or by imprisonment for not more than thirty (30) days, in the discretion of the court.

Sec. 5½. Provided this Act shall not apply to children whose parent or parents or guardian are bona fide members of a religious organization whose teachings are contrary to the practices herein required, and no certificate for admission to any public, private or parochial school shall be required as to them.

Sec. 6. This Act shall be in full force and effect from, on and after its ratification.

In the General Assembly read three times and ratified, this the 17th day of March, 1939.

An Act To Require Physical Examination Before Issuance of License To Marry

The General Assembly of North Carolina do enact:

Section 1. No license to marry shall be issued by the Register of Deeds of any county to a male or female applicant therefor except upon the following conditions: The said applicant shall present to the Register of Deeds a certificate executed within seven days from the date of presentation showing that, by the usual methods of examination made by a regularly licensed physician, no evidence of any venereal disease in the infectious or communicable stage was found. Such certificate shall be accompanied by the original report from a laboratory approved by the State Board of Health for making such tests showing that the Wassermann or any other approved test of this nature is negative, such tests to have been made within two weeks of the time application for license is made.

Furthermore, such certificate shall state that, by the usual methods of examination made by a regularly licensed physician, no evidence of tuberculosis in the infectious or communicable stage was found.

And, furthermore, such certificate shall state that, by the usual methods of examination made by a regularly licensed physician, the applicant was found to be not subject to epileptic attacks, an idiot, an imbecile, a mental defective, or of unsound mind.

Sec. 2. Exceptions to the above section are permissible only under the conditions hereinafter named:

(a). When the medical history and physical examination of either applicant shows syphilis to be present, or when the laboratory test for syphilis is positive, and provided both applicants are informed that syphilitic infection is present, certificate may be issued and license granted only in the following instances: (1) When the applicant with syphilis has been under continuous weekly treatment with adequate dosage of standard arsenical and bismuth preparation given by a regularly licensed physician for a period of one year, and when such applicant also signs an agreement to continue such treat-

ment until cured or probated. It is specified that the condition stipulated in subparagraph one above may be waived in instances in which the female applicant is pregnant and it is necessary to protect the legitimacy of the offspring. In such a case certificate may be granted and license issued provided the applicant with syphilis signs an agreement to take adequate, approved treatment until cured or probated. (2) When the female applicant is past the childbearing age, and provided the applicant with syphilis signs an agreement to take adequate treatment until cured or probated.

Sec. 2½. Residents of the State who are married outside of North Carolina, shall, within sixty days after they return to said State, file with the Register of Deeds of the county in which they live, a certificate showing that they have conformed to the requirements of the examination required by this Act for those who are married in the State.

Sec. 3. If either applicant has been adjudged by a court of competent jurisdiction as being an idiot, imbecile, mental defective, subject to epileptic attacks, or of unsound mind, license to marry shall be granted only after eugenic sterilization has been performed on the applicant in accordance with State laws governing eugenic sterilization.

Such certificate, upon the basis of which license to marry is granted, shall be executed by any reputable physician licensed to practice in the State of North Carolina, whose duty it shall be to examine such applicants and to issue such certificate in conformity with the requirements of this Act. If applicants are unable to pay for such examination, certificate without charge may be obtained from the local health officer or county physician.

Such certificate form shall be designed by the State Board of Health and shall be obtained by the Register of Deeds from the State Board of Health upon request.

That every examining physician under the provision of this law shall make and immediately file with the Department of Health of North Carolina a true copy of such certificate.

Penalty for violation. Any violation of this Act, or any part thereof, by any person charged herein with the responsibility of its enforcement shall be declared a misdemeanor and shall be punishable by a fine of fifty dollars ($50.00) or imprisonment for thirty days, or both.

Sec. 4. Provided that this Act shall not apply to applicants for marriage license by non-residents who are residents of a State or States which do not require the provisions of this law.

Sec. 5. If any clause, sentence, paragraph, or part of this Act shall for any reason be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair, or invalidate the remainder of this Act but shall be confined in its operation to the clause, sentence, paragraph or part thereof directly involved in the controversy in which such judgment shall have been rendered. No caption of any section or set of sections shall in any way affect the interpretation of this Act or any part thereof.

Sec. 6. That all laws and clauses of laws in conflict with this Act are hereby repealed.

Sec. 7. That this Act shall be in full force and effect from and after its ratification.

In the General Assembly read three times and ratified, this the 3rd day of April, 1939.

"Beer Drinkers Warned of Dangers of Cirrhosis of the Liver"

"'Upon seeing my eighth patient die from cirrhosis of the liver and ascertaining that she was a heavy beer drinker, I am writing to ask if your Board should not warn the public that beer drinking causes this disease.

"'When we had no beer in Georgia, I saw no cirrhosis, but since beer has returned I have had eight cases, all proved by operation or autopsy. All the patients except one were women and all of them were admittedly heavy beer drinkers. . . .'

"This letter was sent to Dr. T. F. Abercrombie, Director of the Georgia Department of Public Health, by one of the most prominent physicians of our State. It carries its own message of warning, and we are reprinting it just as he wrote it.

"To bear out, statistically, the importance of this warning, attention is called to the fact that in 1938 there were 127 deaths in Georgia from cirrhosis of the liver, this figure being provisional and not final."

The above item is quoted from the official Bulletin of the Georgia State Board of Health, known as *Georgia's Health*, for March. This reminded us of what we have already observed in our own State. The number of deaths from cirrhosis of the liver in the last five years since the sale of beer was legalized and received the State's blessing has been constantly rising. In 1932, 83 deaths from cirrhosis of the liver was reported in this State. In 1937, the number was 125. Reports for 1938 are not yet available.

As a rule, controversial subjects are avoided in these columns, but in the mind of the Editor there can be no controversy on the one essential question which the liquor trust, including the beer trust, of course, would try to have everybody forget, and that is the fact that alcohol, no matter in what guise, is the same chemical poison wherever found. The alcohol found in beer is the very same chemical which is found in hard liquor in the official State Stores. The liquor simply has more alcohol than the beer. There is no particle of difference in the alcohol found in legalized beer and the liquor in State Stores from that of the bootlegger in the swamps. Alcohol is alcohol. It has a wonderful place in medicine and is practically indispensable, but used in the guise of social drinking, it has always and everywhere when used to excess lead to but one end, and that is disaster for the individual who goes to the extreme in such use. The present style set by the socialites of hard liquor, as well as beer, drinking to excess is merely a repetition of the fashions prevailing in earlier days. Conditions became so bad about the turn of the century that an effort at prohibition was the result.

The propaganda put out constantly by the liquor trust is almost as subtle as that saturating the world by the Nazi party in Germany. It is the most insistent and insidious propaganda aimed at utter destruction of the health and moral fiber of the young people in this country, that the older people have probably ever observed. A few days ago, the daily papers all carried a story from Washington—propaganda, of course—that the *General Counsel* for the United States Brewers' Association and the *General Counsel* for the American Brewers' Association, meeting before a sub-committee of the Senate of the United States, insisted that such institutions as Princeton and the University of Wisconsin were encouraging their students to drink beer. If true, this is a horrible state of affairs. It is a pleasure to recall that a high official of the National Education Association appeared with these two lawyers representing the two big beer trusts in the United States, and opposed the bill then being discussed. The bill was for the purpose of al-

lowing unlimited radio advertising of beer. The officials of the Educational Association said that the unrestricted advertising of alcoholic beverages of any kind was "not compatible with educators' efforts to teach harmful effects of the consumption of alcohol and narcotics."

History repeats itself, and the younger generation will, of course, have to go through again the agony of observing the destruction alcohol used as a beverage will eventually bring, just as it has before in all the history of the world, before it is finally controlled, as a valuable drug just as morphine and opium products, which are essential as drugs but dangerous to use loosely.

Again, the purpose of this comment is to remind that the children and mothers of the State are the chief sufferers from the unlimited sale and use of alcoholic drinks. This observation is from the standpoint of the public health and in no way related to the moral aspects of the situation.

An Act To Further the Prevention of Syphilis In Unborn Children In North Carolina

By Requiring Blood Test Examination of Prospective Mothers

The General Assembly of North Carolina do enact:

Section 1. That every woman who becomes pregnant shall have a blood sample taken and submitted to a laboratory approved by the North Carolina State Board of Health for performing the Wassermann test or other approved tests for syphilis.

Section 2. That any duly licensed physician shall, upon the request of said woman, secure or cause to be secured a sample of blood and submit said sample to a laboratory approved by the State Board of Health for performing the Wassermann test or other approved tests for syphilis.

(a). Such persons as are permitted by law to attend a woman during the period of her gestation and at childbirth but not permitted by law to take such blood samples shall, upon the request of said patient, refer such patient to a duly licensed physician who, in turn, shall take or cause to be taken such blood sample and submit same to a laboratory approved by the State Board of Health for performing the Wassermann test or other approved test for syphilis.

Section 3. Any woman who is pregnant and who is unable to pay a duly licensed physician to take a blood sample for testing, as is required in this Act, may have such blood sample secured by the local county health officer or county physician and submitted to a laboratory approved by the State Board of Health for performing the Wassermann test or other approved tests for syphilis.

Section 4. In reporting every birth and stillbirth, physicians and others permitted to attend pregnancy cases and required to report births and stillbirths shall, on and after January first, nineteen hundred and forty (January 1, 1940), state on the birth certificate or stillbirth certificate, as the case may be, whether a blood test for syphilis has been made during such pregnancy upon a specimen of blood taken from the woman who bore the child for which a birth or stillbirth certificate is filed. If such test has been made during pregnancy, those required to report births and still-

births shall state the date on which the test was made. In addition to the usual information asked for on each certificate of birth, the Supplementary Confidential Medical Tab shall be filled out on each birth certificate. Every certificate of birth shall state whether a serological test for syphilis was made during pregnancy or at delivery.

Section 5. This Act shall be in full force and effect on and after January first, nineteen hundred and forty (January 1, 1940).

Section 6. Penalty for Violation. Any knowing and willful violation of this act, or any part thereof, by any physician, attending mid-wife, county health officer or county physician charged herein with the responsibility of its enforcement, shall be declared a misdemeanor and shall be punishable by a fine of twenty-five dollars ($25.00) or imprisonment for thirty days, or both, in the discretion of the court.

In the General Assembly read three times and ratified, this the 3rd day of April, 1939.

Courses In Nursing Education

The University of North Carolina offers two courses in Nursing Education—July 19-August 26, 1939. The subject of the first course is Supervision in Hospitals and Schools of Nursing, which relates to physical environment, equipment and supplies —also guidance and instruction of personnel—Ward management and Ward teaching.

The second course deals with principles and Methods of Teaching in Schools of Nursing. The purpose is to acquaint the student with accepted principles and practices and to relate them to nursing education.

These courses are open to graduate registered nurses only.

Miss Beatrice E. Ritter, the visiting instructor, is Dean of the School of Nursing at Temple University, Philadelphia.

For further information, write to: University Extension, Chapel Hill, N. C.

About Diphtheria Immunization

We are publishing elsewhere in this issue the text of the law on diphtheria immunization. This law is now in effect. It puts the responsibility on the parent by requiring that "any child between the ages of twelve months and five years who has not been previously immunized against diphtheria shall have administered to such child an immunizing dose of prophylactic diphtheria agent which meets the standard approved by the United States Public Health Service for such biologic products". It is well that no particular product is specified in the law and that no particular method of such administration is specified. This properly leaves it with the medical profession and the scientists of the country to determine. There has been much confusion in the public mind about diphtheria immunization on account of the change in products used during the last twenty years, and furthermore on acount of the number of doses required. A few overzealous health officers in the country have allowed their enthusiasm to get the best of their judgment which has led them to insist that a dose of toxoid, the product now used, means that any child so receiving it is protected against diphtheria from then on

throughout life. Such has not proved to be the case. It is true that a large percentage of children receiving one dose of toxoid are protected, but a sufficient number are not protected to cause the few failures out of each hundred children supposedly immunized to be overly criticized. The final chapter on diphtheria immunization has not been written. Continual and intensive investigation is bringing out many facts almost every month and the wise health officer will advise his community that he is being governed in his procedure by the best current medical opinion available.

Dr. Davison, Dean of the Duke Medical School, informed the editor a few days ago that the practice in the Duke Hospital, and which is concurred in by a committee of the Durham County Medical Society, is to urge "two or preferably three doses of toxoid to be given at intervals of three weeks," this course to be started preferably when the baby is nine months of age. Furthermore, Dr. Davison insists on a Schick skin test being given three months after the last of the three doses and then every year in order to be sure that the child is protected against diphtheria. If the procedure recommended by Dr. Davison could be scrupulously followed from now on, the new law would come much nearer demonstrating its hoped-for expectation in eradicating diphtheria from this state.

A group of Chicago physicians reported some important conclusions along this line in the Journal of the American Medical Association for May 13. A synopsis from this Journal follows:

"More immunity to diphtheria is obtained when plain toxoid is given in a greater number of doses and the interval between inoculations is longer, Herman N. Bundesen, M. D., William I. Fishbein, M. D., and John L. White, M. D., Chicago, declare in the Journal of the American Medical Association for May 13.

"With the adoption of three inoculations of toxoid at monthly intervals, they hope that diphtheria mortality and morbidity rates will show an even greater reduction in the future than they have in the past.

" 'Immunity to diphtheria may occur in various ways,' the authors state. 'It may be inherited, it may be acquired as a result of inoculation of some type of antigenic material or it may develop as a result of the inhalation of minimal doses of diphtheria organisms. There is the possibility of "maturation immunity" or insusceptibility to disease due to maturity, independent of minimal inoculations.

" 'In most children who are immune to the disease such immunity has probably developed as a result of all these factors. The inherited immunity is probably almost completely lost, in practically all cases, by the time the child has reached one year of age. Immunity that develops as the result of the inoculation of antigenic material lasts for a varying period of time, depending on the type of material inoculated and on the interval between doses. The longer the period after inoculation, the less should be the antitoxin content of the blood if these children are not exposed from time to time to diphtheria organisms, so that further immunity may develop as a result of the natural body processes.

" 'In view of the fact that there seems to be a gradual loss in the antitoxic content of the blood, consideration should be given to the advisability of reinoculating children with one dose of some antigen at intervals of from three to five years to maintain a sufficiently high level of antitoxin in their blood to ward off the disease.' "

The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

This Bulletin will be sent free to any citizen of the State upon request

Entered as second-class matter at Postoffice at Raleigh, N. C., under Act of July 16, 1894. Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

Vol. 54 JULY, 1939 No. 7

Pest Mosquito *Malaria Mosquito*

KNOW YOUR MOSQUITOES !

Malaria kills approximately one hundred North Carolinians annually. For every death, it makes several hundred people sick. This warrants the assumption that there are about thirty thousand cases in our State every year.

Adult malaria mosquitoes rest in an angle of 45 degrees or greater with the surface upon which they are standing. Ordinary pest mosquitoes rest slightly "humped up" and parallel to the surface.

The larvae of malaria mosquitoes lie flat on the surface of the water, while the larvae of other mosquitoes hang head downward, with the breathing tube extending upward through the surface of the water.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils
Appendicitis
Cancer
Constipation
Chickenpox
Diabetes
Diphtheria
Don't Spit Placards
Eyes
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Fly Placards
German Measles
Health Education
Hookworm Disease
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Pellagra
Residential Sewage Disposal Plants
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Tuberculosis Placards
Typhoid Fever
Typhoid Placards
Venereal Diseases
Vitamins
Water Supplies
Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care
Prenatal Letters (series of nine monthly letters)
The Expectant Mother
Breast Feeding
Infant Care. The Prevention of Infantile Djarrhea.
Table of Heights and Weights
Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Instructions for North Carolina Midwives.

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THE Health Bulletin

PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. 54 JULY, 1939 No. 7

Notes and Comment

By THE EDITOR

IN this issue, we are publishing two interesting pictures. The one on the front page shows two mosquitoes pitched at varying angles on an even surface. One is a malaria carrying mosquito. The other is not. The caption under that picture is KNOW YOUR MOSQUITOES, and a brief description follows, most of which was taken from the article beginning on another page written by Mr. C. M. White, an engineer in the department, and entitled MALARIA AND MOSQUITOES. This article has practical information at this time which should be valuable to everybody in the state, particularly as it embodies one of our fundamental principles and that is seasonal information.

The other picture we are publishing on the outside back cover. On our request, Mr. Ben Dixon MacNeill, one of the best known newspapermen in the state, now located in Manteo, sent the picture to us. We are also indebted to Mr. MacNeill for the caption which is under this picture. Mr. MacNeill rightly makes the observation in a letter to the editor that so far as any of us know, the mosquito control project in the great outdoor theater on Roanoke Island is the only place in the country where such an effective arrangement for mosquito control has been accomplished.

From the standpoint of public health interest, the effective mosquito control carried out in the great open air theater on Roanoke Island for the past two summers has been one of the most interesting procedures carried on anywhere in the United States. The photograph of the power house shows that the architecture of the building is in keeping with the historical requirements in depicting as nearly as humanly possible the scenes existing there on that island 350 years ago. About July 1, the great open air theater will open for its third season. It will be open for about five performances each week. During the past two seasons, many thousands of people, including the President of the United States and many high officials of the Federal Government at Washington attended the performances. The theater performance is a historical play written by Paul Green of the University of North Carolina Faculty and a noted playwright. It is entitled THE LOST COLONY. It is one of the most interesting dramatic presentations ever put on in the state.

Roanoke Island itself and this scene as presented on the exact spot where the first effort at colonization on this Continent by English speaking people was made is one of the most import-

ant historical shrines in all America. It is a place which every patriotic citizen in the country who prides his English heritage should visit. During the months of July and August this year, it is expected that a large number of visitors will attend the performance as presented in the open air theater on Roanoke Island near the town of Manteo. Visitors can come with the assurance that they will be free from the annoyance of mosquitoes while witnessing the play.

* * * * *

In the year 1939, there were fewer deaths from typhoid fever in North Carolina than ever occurred before. As long, however, as there is one case in the state which may act as a source of infection, there will be danger from that disease. Already as these lines are written, reports have come in of the appearance of the disease in several localities. It is necessary in order to keep this disease under strict control for physicians, health officers, and the people themselves to be on the alert at all times.

Typhoid fever is spread only through the discharges of patients having the disease. A carrier of the disease, that is a person who eliminates active typhoid germs but is not sick himself, when engaged in the preparation or sale of food, as a cook or waitress, may infect numbers of people. Strict control of the patient suffering from the disease is necessary, especially in the careful disposal of discharges, so that well persons may not be exposed to attack from such a source.

In no way has the State Board of Health and the various county units rendered greater service to the people of North Carolina than has been done during past years in the control of typhoid fever. In doing this, it has been sometimes necessary to place restrictions on the production and sale of milk and other foods which have seemed to dairymen and others at times to be strict and harsh. The State Board of Health does not like to make restrictive demands on people any more than other agencies. The regulations of hotels and cafes selling food to the public has been necessary in order to prevent the spread of typhoid fever and other like diseases. In this connection, we would like to urge our readers to read carefully the article in this issue entitled, "The Meaning of the Words: Grade A," by John Andrews, an engineer in the Division of Sanitary Engineering of the State Board of Health. Immunization through the use of typhoid vaccine has been a wonderful aid in controlling typhoid fever, but it also requires constant vigilance in order to assure all the people in the State a pure water supply and safe milk and other food.

* * * * *

As this issue goes to press, it is well for the Editor to take note of the distressing occurrence at Henderson, in which an insane patient was confined in the common county jail in a cell with another insane patient and was beaten to death. It is not the purpose of this editorial to comment on the circumstances which caused the death, nor to criticize the local officials. That is a matter for the Health Department of Vance County, the legal machinery and particularly the Solicitor of that district, in other words, the courts. What we do want to emphasize is the fact that a county jail is no place to confine an insane patient. It is

necessary at times to place such patients under restraint, particularly when the patient's family are not physically or financially so situated as to take care of the patient until admission may be secured in one of the State institutions for the insane. However, it is the duty of people in every county to see that when such patients are confined, that they are placed in a suitable room of the jail, placed alone and that an attendant is in constant hearing in order to care for the patient.

It is a well known fact that for several years there has been increasing demands on the three State-conducted hospitals for the insane beyond the limits of their capacity to accommodate all the patients needing treatment offered in those institutions. The most important observation we can make here in this column is to urge the people of the State to cooperate with the State Board of Health and other agencies in the State at present engaged in a State-wide effort to control and eliminate such diseases as syphilis and to demand that every newly married couple comply with the State regulations for freedom from communicable diseases before securing a license to marry, whether in the confines of North Carolina or in any other State, provided they are to be citizens of this State after they are married. If the marriage law and the law on eradication of syphilis could be rigidly enforced and applied in every community, and if the plans of the State Board of Health for better care for mothers and babies could be put into effect in every county in the State, in twenty years there would be far less demand for accommodation in the State institutions for the insane than there are now.

Malaria and Mosquitoes

By C. M. WHITE, Engineer

Malaria Investigation and Control Unit, Division of Epidemiology, North Carolina State Board of Health

SINCE the dawn of history, mankind has suffered from innumerable diseases. Medical science has discovered the causes of most of them and devised means by which they can be prevented or controlled. A few generations ago smallpox destroyed entire villages, while typhoid fever ran rampant throughout the world, killing thousands of people in the very prime of life. Now smallpox is almost as rare as leprosy, while typhoid can be and, in most instances, is perfectly controlled.

But the control of the malady that has been one of the greatest curses of mankind through the ages, impeding the progress of civilization and sapping the vitality of nations as well as individuals, has been neglected until the present century.

Throughout parts of Greece and Italy, where a high state of civilization flourished prior to the Christian era, one now finds dismantled ruins. One of the major factors which contributed to the downfall of these civilizations originated in the marshes and swamps adjacent to the abandoned cities. Malaria so sapped the vitality of these people that they were lacking in the valor and alertness of their forbears, thus falling easy victims to the barbarians from the North.

Through lack of knowledge, mankind at that time was unable to cope with the infection. They knew

they had chills and fever, but were entirely ignorant of the source. It was accepted as something providentially sent upon them. Later, it was noticed that the infection was highest in low, marshy areas. This gave rise to the belief that it was caused by contaminated air arising from the swamps. Hence, the name "mal air" or malaria.

A little over a half-century ago a young French surgeon named Lavaran, while examining the blood of a malaria patient through a microscope, discovered parasites that were at that time unknown to the medical profession. After carefully examining blood smears from people with malaria and from well persons, it was found that these parasites existed only in the blood streams of the malaria victims. Shortly after that, Sir Ronald Ross, an English army surgeon, proved that these parasites could be transmitted in nature by only one means. An Anopheles mosquito must first bite a person with malaria and then bite another person.

Malaria fever, which is sometimes known as chills and fever, bilious fever, swamp fever or the ague, is common in hot, wet countries. In the United States it is found along the coastal plain from Connecticut to Texas, over parts of the Mississippi Valley and on the Pacific Coast. In North Carolina it is most prevalent in the coastal plain area, but is a serious problem in certain counties in the Piedmont section, and is sometimes found as far west as Asheville. Malaria kills nearly one hundred North Carolinians annually, and no one knows how many people who have had their resistance lowered by malaria, die of other diseases. Every year over four thousand people die of it in the United States. It makes several hundred people sick for every one it kills. This would indicate that about thirty thousand people in our State suffer from malaria every year.

There are many different kinds of mosquitoes in North Carolina just as there are different kinds of birds. It is harder to see these differences, because the mosquitoes are so much smaller. When seen under a microscope, two different species of mosquitoes may bear no more resemblance to each other than a blue jay does to a brown thrush. The habits of mosquitoes are equally different. Some may be found in woodlands, others in open fields, and still others only around human dwellings. As the hawk feeds on mice, chickens, insects and smaller birds, while the sparrow eats only plant seeds, so the mosquitoes differ in their feeding habits. Some mosquitoes never bite, others bite only cold-blooded animals such as snakes and frogs, while still others feed on man and other warm-blooded animals. It is believed that only one mosquito, **Anopheles quadrimaculatus**, carries malaria in this State.

Anopheles mosquitoes are easily identified, as they are of a slighter and more graceful build, with spotted or dusky wings. When standing on a wall they rest in a straight line, usually on an angle of forty-five degrees or greater with the surface. Other mosquitoes rest slightly "humped up," with the line of the body parellel to the wall. Luckily for mankind, malaria mosquitoes rarely bite in the daytime. They are shy and easily driven off. They seldom bite a person who is moving about, but usually feed on people who are asleep. The bite of the Anopheles mosquito is not very painful and they do not sing as loudly or as often as many other mosquitoes. For this reason, the mosquitoes attracting the most attention are seldom Anopheles and large numbers of Anopheles can be

present without attracting much attention.

Mosquitoes breed only in water. People are mistaken who say that they breed in grass, weeds and chinaberry trees. The adult mosquitoes seen in these places are only resting or seeking protection from the sun or from enemies. Different mosquitoes prefer different breeding places, just as the crow nests in a different place from the quail. Malaria mosquitoes breed in fairly clean, still bodies of fresh water, containing vegetation and floatage. A pond with grass and trash in it or a poorly drained ditch usually makes an ideal breeding place.

There are four stages in the development of mosquitoes. First, the egg is laid on the surface of the water. After a few days this hatches into the larva or "wiggle tail," which soon becomes a pupa. From the pupa the adult mosquito emerges. All changes take place in water and require about ten days or more, the development being slower in cool weather.

The Anopheles larvae can easily be distinguished from those of other mosquitoes. The Anopheles larvae lie flat on the surface and, when very young, resemble a basking pike. The non-Anopheline larvae hang head downward and will dive when touched. If the Anopheles larva is touched it will usually glide away on the surface, although at times they will dive. They are not in the least alike and after the differences are once pointed out, one will never mistake one for the other again.

In malaria parasites we find both males and females, as well as those without sex. When the Anopheles mosquito bites a person with malaria, if she sucks up both male and female parasites, numerous young parasites are reared in her body. These are injected into other people bitten by the mosquito. Upon entering the human body they attack the red blood cells, where they grow and each divides into from eight to thirty-two small parasites, finally causing the cells to erupt. Each of the parasites which is liberated attacks other cells and the process is repeated over and over. When the cells erupt a poison is released which causes chills and fever.

The mosquito which carries malaria in North Carolina breeds in ponds, swamps and stagnant ditches. Many of the ponds which are producing large numbers of these mosquitoes were created by man. The hydroelectric companies require large storage reservoirs to keep their generators turning. Mill ponds, fish ponds, recreation lakes and ponds which were built to beautify the landscape are to be found all over the State. In the construction of highways and railroads many undrained borrow pits, sand pits and gravel pits have been created. Near abandoned brick kilns we find clay pits which were never properly drained. In draining land for agricultural purposes little regard has been shown in the past for the problems of malaria control. Most of the canals were constructed with wide, flat bottoms and irregular grades. During periods of little rainfall the flow stops and these canals become ideal incubators for malaria mosquitoes.

One needs only to keep the malaria mosquito from biting him to keep from contracting malaria. This may be accomplished in several ways. The most effective method is by destroying mosquito breeding places by filling or draining. If the drainage ditches are properly constructed and maintained they will drain and thus eliminate the breeding area. When a pond cannot be drained there are

several methods by which mosquito breeding can be kept down. It should be kept clean and free of all vegetation, especially along the edges. Various mixtures of petroleum oil or Paris green dust applied to the surface of the water will kill the young "wiggle tail" mosquitoes. Since it takes about ten days for the "wiggle tails" to develop into full grown mosquitoes, these larvicides should be applied every week or ten days. Every home should be mosquito-proofed. This is one precaution which should be taken by all individuals living in malarious areas. A properly mosquito-proofed house has all windows, doors and chimneys covered with 16-mesh wire screen. All other openings should be entirely sealed.

As a safeguard against the spread or introduction of malaria, the law requires that before anyone creates a pond a permit must be obtained from the North Carolina State Board of Health. This law applies to any body of water formed by the construction or excavation of a basin or the obstruction of a stream-flow in such a manner as to cause the collection of a body of water which would not have formed under natural conditions. The regulations require that the pond be maintained in such a manner that it will not produce Anopheles mosquitoes and become a menace to the public health.

Ponds covering less than one acre, used exclusively for watering livestock or other domestic purposes such as goldfish pools, etc., are not included in the regulations.

An extensive anti-malaria program has been conducted in North Carolina since 1933. The WPA and other relief agencies have furnished labor for the drainage of ponds and swamps in sixty counties under the supervision of this Department. Over two thousand miles of ditches have been constructed, which drained over ten thousand acres of breeding area. It is sincerely hoped that the local beneficiaries will maintain these ditches and not allow these areas to revert to their former condition.

The State Highway Department is showing a fine spirit of cooperation in our program by requiring contractors to drain all borrow pits on new construction and to install pipe lines and culverts at elevations which will not interfere with good drainage.

The owners of numerous ponds throughout the State, which were built prior to the passage of the law governing ponds, are conducting control programs under our supervision. The results are pleasing in all cases. Malaria has been almost eradicated in the proximity of these ponds, where most of the population sufered before control measures were started.

Numerous towns within the State are conducting intensive programs to prevent the breeding of mosquitoes with very gratifying results.

It costs to control malaria, but it is well worth the price. Enormous sums are spent annually for our schools and highways. These expenditures pay enormous dividends in uplifting our standards of living and contributing to our pleasure and general welfare. The same is true in malaria control. Malaria can be controlled. It will be driven out of our State eventually. The public is becoming more conscious of the problem all the time. Let's get together and hasten the time when North Carolina will be the most healthful State in the Union.

The Meaning of the Words: "Grade A"

By JOHN ANDREWS, Assistant Engineer,
North Carolina State Board of Health

IN this article we shall discuss what the words "Grade A" mean to you and me. They have a very special significance, a very important meaning, and they were actually created for your benefit. Let us see just what these words really mean.

We are all familiar, I think, with the fact that something which is outstanding or superlative in quality is frequently called "A-Number One" or "Grade A." In this sense, these expressions are slang, and although we don't like to use these words in a loose way, we are glad that they are quite generally known to be expressions of superior quality. The State Board of Health is concerned with a limited usage of the term "Grade A." We are interested in the meaning of Grade A milk, Grade A shellfish, Grade A restaurants, hotels, tourist camps and meat markets.

Let us first discuss restaurants—or cafes, if you prefer that word. We hope that many of you are familiar with the blue Grade A cafe signs of the State Board of Health. You will find them on the wall in all good cafes. Several questions suggest themselves: What is a Grade A restaurant? How do we determine this grade? What is the difference between a Grade A restaurant and one which is not in this class? Why aren't all restaurants in the Grade A group? Why should we have a system of grading them? Finally, what does the grade mean to you and me? Now, I'll try to answer those questions. First, the inspection of restaurants is a duty of the State Board of Health in accordance with the laws of the State of North Carolina. The purpose of the law and the inspection work is the protection of the health of the people of our State, and of our visitors. It is known that several diseases may be transmitted by improperly protected food; in addition, others may be spread by the utensils. We must remember that possibly the principal source of danger in a cafe is not the place itself and not the food, but the other customers. We must remember that when we eat in restaurants we actually put forks and spoons into our mouths, and we touch the drinking glasses to our lips. We must remember that these same utensils have been treated in the same intimate way by several other customers before us and we certainly do hope that these forks and glasses were properly washed before we used them. But how do we know that the utensils were given more than a quick dousing in dirty water, followed by a hearty rub with a dish towel that was over-due at the laundry? We all know that such dish-washing methods are worse than no washing at all, because the utensils may look clean at first glance, and we are so used to having scrupulously clean eating utensils at home that few of us ever think of inspecting the cutlery and china when we eat out. As a matter of fact, we would feel rather foolish if we rubbed our plates or pulled our napkins through the tines of our forks in a restaurant to see if they were clean. What would other people think of our table manners? What would the waiter think? Actually, the customer should not have to be his own inspector. When we eat out, we have a right to expect wholesome food, a clean

table and dining room, clean, properly washed table-ware; furthermore, we have a right to be served food that was prepared in a clean kitchen by clean, healthy cooks; we have a right to be served water that is pure, wholesome and safe; and we have a right to be served milk that is clean and safe. We have a right to expect all these things; in fact, we would feel very much upset if we suddenly discovered that the cafe in which we ate supper last night, for example, was serving a low quality milk which a progressive herdsman would not feed to his calves. Yes, we have a right to expect many things, but how can we know that our demands for cleanliness are being met? We may feel that the better restaurants will automatically take care of these demands of ours; that may be true, but which are the better restaurants? One can't judge the whole place by the appearance of the dining room, because dining rooms are purposely kept clean and tidy to impress the customer—that is only to be expected. I think that I have said enough to show the impossibility of the customer's solving this problem for himself, and so we return again to the question of how we can determine the cleanliness standing of cafes.

The answer to that question is the little blue Grade A signs that are posted by the Board of Health. The State Board of Health has provided a scoring system which has been in use for many years in North Carolina. This scoring system gives certain percentage credits to the many different items of cleanliness, methods, facilities and equipment. The ideal restaurant would receive a rating of 100 per cent. Since it is impossible to expect perfection, the select group of Grade A places has been made to include all which achieve a rating of 90 per cent or more. Those making a score of between 80 and 90 per cent are Grade B cafes; those between 70 and 80 per cent are Grade C cafes, and those which can not make 70 per cent are not entitled to serve food to the public if they can not improve their rating to at least 70 per cent in a reasonable period of time. The uniform scoring system of the State Board of Health enables its trained field personnel to make rapid and efficient inspections of the establishments which serve food to the public, penalizing them for lapses in cleanliness, failure to provide essential health safeguards and the necessary equipment and facilities, and, of course, crediting them where credit is due. By means of this uniform scoring system in the hands of trained inspectors, all restaurants in the State are measured by the same yardstick. After the inspector completes his survey of the premises, he totals up the credits on his score sheet; the sum is the rating of that place. If the total is 90 per cent or more, the inspector posts a blue sign bearing the legend Grade A Cafe on the wall in a location readily visible to the public. A green sign is posted in Grade B establishments, and a red one in Grade C places. The proprietor is required to leave this sign on the wall for the information of his customers; to remove or deface it makes him subject to a fine.

At the start of this article, I asked the question: "Why aren't all restaurants in the Grade A Group?" I think the answer is obvious. If all the cafes in North Carolina were awarded Grade A signs, I am sure you would agree that one of two things would be wrong: either the standards for Grade A were mighty low or the inspectors were grossly in-

efficient. In North Carolina, we believe that neither of these conditions is true, although we will never claim perfection for our work. In North Carolina we have many Grade A restaurants; also, we have many Grade B and Grade C places.

It is my purpose in this article to urge you to patronize those restaurants which display what the State Board of Health considers to be a badge of honor, a blue-ribbon, and indication of "A-Number One" quality; I mean, of course, the sign bearing the blue letters "Grade A Cafe." I am sure that you want you and your family to receive the best that you can afford, and I assure you quite sincerely that patronizing only Grade A restaurants is good practical economy. You may ask why Grade B and C restaurants are allowed to operate at all, if we urge you to patronize only the better ones; the answer to that question is, I believe, that this is an example of our democratic form of government. The lower grade places are there, if you care to patronize them.

The State Board of Health in posting the grades of cafes furnishes the public with an index to their sanitary condition. Simply by looking at the sign, which must be left in a conspicuous place, you can find out whether or not you care to patronize a certain place. Last year I made a trip through several States in which restaurant inspection work apparently was not done. Several times I ate in cafes which revealed themselves as probably Grade C places after I was served. At those times I realized the value of our North Carolina inspection work and wished quite heartily that the proper grade had been posted where I could have seen it before I seated myself. Yes, I would have walked out of those Grade C places and into a Grade A place.

The State Board of Health sometimes hears such statements as this: "My town doesn't have any good eating places; what's the matter with our cafes? Why don't they fix up their places?" Such statements are sometimes true, I am sorry to say. The correct reply is often that there isn't so very much wrong with the cafe proprietors; but rather, that the people do not demand sanitation. If your town doesn't have any good clean "eating places," you can get them if you want them. Why be satisfied with Grade C when you want Grade A? All you need to do is to patronize the Grade A. You are going to receive just what you demand; why not demand what you want?

I have attempted to show the general meaning of "Grade A" as it concerns restaurants, without discussing tiring details. I said that by means of its scoring system the State Board of Health divides restaurants into three classifications: Grade A, B and C, so that you may choose which you wish to patronize. I have urged that you all look for, demand and patronize the Grade A place.

At the start of this discussion, I said that we were also interested in the meaning of Grade A as applied to hotels, milk, shellfish and other things. The meaning of Grade A is the same there as it is in the restaurants; no more discussion seems necessary. Although the details and the mechanics of the grading system necessarily must vary according to the nature of the subject to which it is applied, the significance of the term "Grade A" is simple. It means "the best."

Throughout this discussion I have indicated for reasons of convenience

that all the inspection work was done by the State Board of Health. That is not true. The work is now done largely by your county or city health department, which in North Carolina, is the basic unit of health work. The function of the State Board of Health in this respect is to unify, coordinate and standardize the inspection work of the different local health departments, to assist them when desired, and to carry on certain limited activities in counties which have no local health department.

I repeat once more a very serious request: Will you not look for and patronize the legend "Grade A"—the symbol of quality? It was created for you at your request; we urge you to support it.

Extracts from a Staff Nurse's Weekly Report

"A young mother phoned one morning that she was sending for some literature if we had it on summer care for her baby. She was sent a copy of Infant Care and the many special pages of feeding carefully marked for her. She reported later that she had wondered where she could get just such information, as her doctor was too busy to give her information on all the many details necessary in infant care."

This was Monday. Several tuberculosis and other poor patients were visited and other miscellaneous items attended to. In the afternoon the nurse helped to conduct a maternity and infancy center several miles up the mountain from the health office.

On Tuesday, the work of visiting each one of the more than forty midwives in the county was begun. At the home of the first one seen, toxoid was given to her two grandchildren who the nurse thought would never get out of their corner of the mountain until the school bus comes along in the early fall. A pellagra case was visited for the purpose of seeing how well she was following the instructions which had been given to her about her diet. And "another visit to a cancer patient who had recently paid $5.00 for an unlabeled jar of 'radium' sold by a so-called 'Doctor' Davis from 'Mr.' Hopkins' hospital in Baltimore." The "doctor" had told this poor cancer sufferer and the family that he had "become tired of city life in Baltimore" and was "simply strolling through the high hills of Ashe County, hoping to help a few sufferers while he was resting." And carrying the jugs for sale, was of course very restful—at $5.00 per—for the faker.

Wednesday was spent in visiting midwives all day. The day was closed with a walking mileage of between five and seven miles. It could not be said just how many.

Thursday a good part of the day of this nurse was spent in visiting several midwives in the mountain regions several miles from the health office. In addition to the midwife instruction work, the nurse "forded a river twice, walked over swamp and rock to visit a family of a forlorn woman whose entire family, including herself, had had influenza in March. The husband had developed pneumonia and then became insane." At the time the nurse reported the husband had been confined in jail as an insane tuberculer patient for five weeks, waiting to be admitted to the State Sanatorium. On the way back home that evening, the nurse called on another woman who had had influenza and pneumonia in December. Living in an inaccessible mountain

neighborhood and the road impassable for automobiles for most of the winter, neither the woman nor her family had even attempted to procure aid. They had not sent out for help until conditions were extreme. All of the family are reported better at this time, owing to the ministrations of the public health nurse—who is Miss Pearl Weaver.

Changes in State Board of Health Personnel

On Sunday, February 12, Mr. James P. Stowe, a long time member of the State Board of Health, died at his home in Charlotte. Mr. Stowe represented the druggists on the Board. He was the only member of the State Board of Health who was a member prior to the reorganization in 1931. Mr. Stowe was a druggist of fine reputation and he was an excellent gentleman. He made a valuable member of the Board. He was liberal at all times on every matter which was in the broad and best interests of all the people in the state. His services will be greatly missed.

After his death Governor Hoey appointed Mr. Rogers McDuffie, a druggist of Greensbore to fill the unexpired term of Mr. Stowe. Mr. McDuffie declined to qualify because it would have been necessary for him to resign his position as a member of the North Carolina Board of Pharmacy, which he preferred not to do.

After Mr. McDuffie declined to serve the Governor appointed Mr. C. C. Fordham, Jr., also a druggist of Greensboro. Mr. Fordham is a graduate of the University of North Carolina School of Pharmacy, holding the degree of Ph.G. After his graduation from the University in 1925 he was associated with his father, C. C. Fordham, Sr. in the retail drug business in Greensboro until the latter's death in 1938. Since that time Mr. Fordham has conducted the business himself. The Fordham retail drug business was founded in Greensboro in 1898 and has been in continuous operation since that time. The other members of the State Board of Health welcome Mr. Fordham into the group. It is felt that Mr. Fordham will continue the fine tradition well laid down by Mr. Stowe.

Governor Hoey has also reappointed Dr. H. Lee Large of Rocky Mount and Dr. H. G. Baity of Chapel Hill each to a four year term. The State Medical Society at its last conjoint session also reelected for four more years each, Dr. John LaBruce Ward of Asheville, and Dr. G. G. Dixon of Ayden.

Unknown Frontiers

By M. F. TRICE, Engineer Division of Industrial Hygiene

As everyone knows, stage plays at best are poor substitutes for the real life dramas that are enacted from day to day. The principal character in many a real life tragedy is played by an actor who is not aware of the importance of the role until it is too late to change the script. This was the case with Bill. Bill, by the way, was not the man's name, but it will serve as well as any name for this true life story, as the real identity of the man should not be disclosed.

Bill was a country boy—the son of very poor parents. In consequence, it was necessary for him to begin early to earn a livelihood. At 13 years of age Bill got a job cutting

and hauling wood. It was not much of a job, to be sure, and it was terribly hard for an undernourished boy, but it did enable him to earn a few dollars a week. And for three years Bill stuck to his job, but all the while he longed for work that would be more remunerative—work that would bring in more than the few pitiful dollars he received for cutting and hauling wood. Finally, Bill's luck changed, so he thought, because he got a real job in a manufacturing plant. His weekly wage was more than he had ever received before, so Bill was happy in his new work.

There was only one drawback to the new job—the dust, which filled the air to suffocation from the beginning to the end of his daily tour of duty. "But that can be tolerated," thought Bill. Wasn't he making more money than he'd ever made before? Didn't he have a regular job? "Shucks!" thought Bill, "a man can put up with a little dust—it may be aggravating at times, but who ever heard of dust hurting anybody?" So Bill was happy in his new found employment.

In the natural course of events, Bill married and settled down with the prospects of a happy life ahead. However, as time went on he began to notice that it became increasingly difficult to shake off a feeling of tightness in his chest that appeared toward the end of each day's work. As week succeeded week this feeling of distress became more acute, and, finally, Bill noticed that his capacity for work was getting less with each passing month.

The symptoms became more pronounced, and finally Bill developed what he thought was influenza, characterized by cough, sputum, and pains in both sides of the chest. These acute symptoms abated somewhat, but his capacity for work did not return, and so nine years after he began work he had to quit.

When examined by a physician Bill was found to be suffering from a marked shortness of breath, he was anemic in appearance and demonstrated a chest expansion of only one-half inch. An X-ray of the chest revealed dense shadows in the upper portion of both lungs. Such shadows as were observed indicated that about half of each lung was affected. The condition was diagnosed as a dust disease with possibly an associated infection, tuberculosis questionable. In an attempt to establish tuberculosis as a complicating factor, four sputum specimens, collected on four separate occasions, were examined for tubercle bacilli with negative results. Such findings indicated a diagnosis of pneumoconiosis, a disease similar to silicosis resulting from the inhalation of dust.

Here was stark tragedy. There is no cure for such a disease. The dust inhaled over a period of nine years had destroyed about half of the healthy tissue in each lung. There is no treatment that will restore tough, fibrous, dust-damaged lung tissue to a healthy useful condition. There was little that Bill could do; his slightest effort was attended by such a shortness of breath that gainful employment was impossible; and there was no way in which his condition could be relieved. Indeed, when a physician of the Division of Industrial Hygiene examined him six months later the lung condition had become worse even though he had not returned to his dusty job. The shadows on the chest X-ray film had spread and increased in density. In addition, Bill had had one cold following another in almost unbroken succession. Here, indeed, was a sick man.

When Bill died a few months later,

he was still a young man—only 27 years old. Inasmuch as the disease had progressed so rapidly from the time of the first examination until the death of the victim, a post mortem examination was deemed desirable. Accordingly, permission for an autopsy was obtained from the widow. The examining physician found that the upper lobe of each lung was rubbery in character and filled with gritty areas of stone-like consistency. No evidence of tuberculosis was found. Thus, the original diagnosis of dust pathology was confirmed.

And now, this real life drama may be summarized. It began, as you recall, with a boy of 13, who after spending three years cutting and hauling wood got a job in a dusty plant. A good job he thought it was because it offered steady employment and satisfactory wages. His future appeared secure, he was happy and in the course of events was married. Nine years later he found that a mysterious ailment was sapping his strength; his breath was short, there were pains in his chest, and finally he was forced to quit work. Just eleven years later the play ended in a country churchyard.

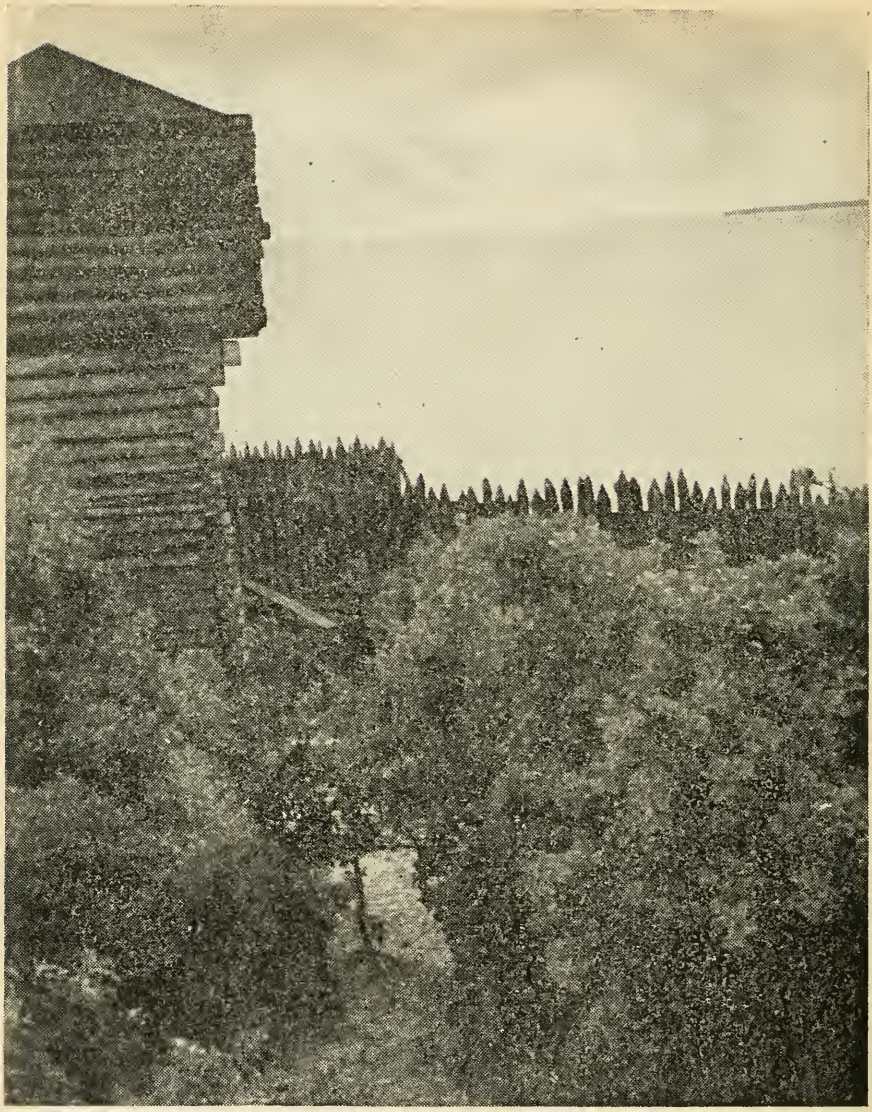
Who was responsible for this tragedy? Certainly not Bill—he considered himself fortunate in securing a good job, despite the fact that the dust annoyed him. Indeed, it cannot be said that the employer wilfully permitted conditions to exist that destroyed Bill's health. No one knew at the time that the dust involved was dangerous. Even the dust experts employed by the insurance company that wrote the workmen's compensation insurance for the plant considered the risk to health to be slight. It was a case of ignorance—an unknown frontier.

There are numerous frontiers in the field of Industrial Hygiene—some unknown, others little understood, and a few that have been explored sufficiently to disclose the nature and extent of the health hazards that exist therein. As in Bill's case, in far too many instances it is an innocent victim that pays with his life for the knowledge gained in an unknown field. In industry today silieeous dusts constitute only one of many groups of substances that will affect the health of workers. There are volitile solvents, toxic mists, poisonous gases, heavy chemical solids and liquids, and a variety of other substances and conditions that affect the health of the worker. The exploration of these strange frontiers is the prime function of a Division of Industrial Hygiene.

As a result of the activities of this Division in the few short years since its establishment, the occupational disease hazards in several industries have been eliminated entirely or greatly reduced in extent. In this connection, a parting reference to Bill is in order. This man was born just 10 years too soon, because today safeguards prevent the escape of dust into the atmosphere, and no hazard to health attends the man who does Bill's work.

It may be remarked in passing that the doctors are sometimes called silly because they spend their lives inventing ways of controlling disease, thereby lessening their business. That is a stupid view. By preventing the epidemics we keep the kids alive until they reach old age, opulence, and achieve rheumatism and high blood pressure. One rheumatic patient will produce more revenue than a whole epidemic of measles. I can prove it by my books.

(From A. E. HERTZLER, *Horse and Buggy Doctor*, Harper & Bros., 1938, p. 59.)



This palisaded tower overlooking the Lost Colony amphitheatre on Roanoke Island serves not only to house a great battery of spotlights that illumine the performance of Paul Green's "The Lost Colony," but it houses also one of the most unique power plants in the world. Two years ago the State Health Department, with the collaboration of the Department of Agriculture and the Roanoke Historical Association, set out to do something about mosquitoes which threatened the success of the 350th anniversary of the birth of Virginia Dare. Nightly the theatre was sprayed down by men with knapsack tanks and the throngs that came to the Island were free from torture. Last year the theatre area was piped and a central tank installed with an electric pump, and no spectator suffered a mosquito bite during the summer. This year the equipment has been improved.

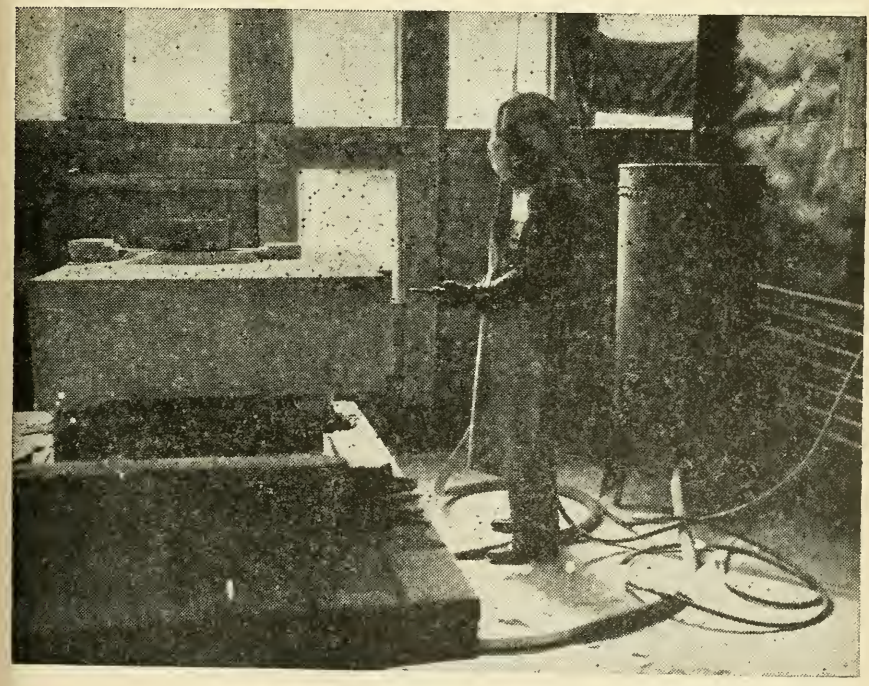
The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

This Bulletin will be sent free to any citizen of the State upon request

Entered as second-class matter at Postoffice at Raleigh, N. C., under Act of July 16, 1894. Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

Vol. 54 AUGUST, 1939 No. 8



HEALTH PROTECTION FOR A WORKER

Some of the chemicals, gases, fumes and dusts to which workers in industry are exposed are definitely injurious to health. The daily operations in many industries generate large quantities of harmful mineral dusts. There are several devices that may be employed to protect the health of the workers from such dust, one of which is the positive pressure air helmet worn in the above picture by a sand blast operator. This worker is enveloped in a cloud of harmful dusts whenever the sand blast is operated; however, he breathes only the clean air that is supplied from an outside source through the hose connected to the back of the helmet. The Division of Industrial Hygiene advises the installation of health safeguards in industry where workmen are not so protected.

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THE Health Bulletin

PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. 54 AUGUST, 1939 No. 8

Notes and Comment

By THE EDITOR

HUMBUGS

Old Man Barnum was not the only individual who has been impressed with the fact that the people like to be humbugged. All people with a sufficient number of brain cells to observe what goes on around them every day may be impressed with the truth of the observation.

About ten or twelve years ago a fast-working faker came to town in company with his wife. Together they were selling a book and putting on a lecture course. She was working the ladies and he was working the civic clubs. She got herself invited before they had been in town three days to hold forth in the auditorium of one of the biggest department stores in Raleigh. He was invited to all the eating clubs, not only to get a free dinner, but to have the opportunity of presenting his book at about $5.00 a copy, etc. His specialty was food, that is food for him provided by someone else, as it turned out to be.

In one of the clubs that he first appeared for the Monday luncheon, a physician present listened but said nothing. The fellow was introduced as President of the "National Health Association." Incidentally, no such organization had ever been known, but the introducer did not know that and did not take the trouble to inquire of anyone who did know, being a lawyer he had other work to do. The doctor member, however, did take sufficient interest to make a mental note of some of the things he said. One was that anyone who ate Lima beans and apple pie at the same meal was poisoning his system. Another statement was that if he ate white bread very long, the heart would curl up and die. All this did not sound like much scientific stuff to the doctor, but as noted above, he thought it best to keep quiet.

The next day the fellow got a little bolder and made a good many more even wilder statements, and in his enthusiasm, engendered by the rapid sale of his book, lapsed into some very poor English, and that excited the curiosity of a college professor who happened to be a member. As a result of it all, while going even stronger on the Wednesday luncheon club meeting of still another club, two physicians who happened to have their eyes open and who belonged to the fourth club scheduled for his Thursday appearance for a free dinner, and one of them being on the program committee, decided that perhaps it might be well to come up to the office of the State Board of Health and see if the officials knew anything about it. The writer told them, yes, he knew plenty about this particular faker, that he had been repudiated and run out of many places in the country, that there was no such organization as he was claiming to represent in the capacity of President.

Furthermore, when pushed for a statement as to the headquarters of the Association, he gave a fictitious address in Newark, N. J.

To end this part of the story right here, it may be stated without fear of successful contradiction, that the writer of these lines was the official of the State Board of Health consulted, and the gentleman and his wife moved out of Raleigh between sunset and sunrise on Wednesday night. The rest of their engagements were of course promptly cancelled. The Editor had the privilege of getting the only invitation he ever had in Raleigh to appear before the club of the Thursday meeting in which the faker was scheduled to eat and speak. The Editor enjoyed the free dinner in the old Yarborough Hotel and presented all the documentary evidence necessary to confirm the fact that the gentleman was a faker.

Now, it would seem that the above makes a nice and complete story, but it does not. Just a few weeks ago, this same chap blew into Raleigh, having made an engagement with the same club that repudiated him before. This time he hailed from Washington, D. C., and gave another fictitious organization as his sponsor. Talk about the murderer coming back to the scene of the murder is not a circumstance to this bold action, in the humble opinion of this writer. Scientifically speaking, the fellow was and is a faker and will die a faker, but there is one thing he knows and that is that the public just must be humbugged, and the more open the better for most of them.

On this last engagement, had it not been for the sharp eyes of one of the district officials of the club who was present and whose memory for faces is the envy of every politician in these parts, the old humbug would have sold his books right and left and would have filled his tentative engagements at the two high schools in Raleigh lecturing on "Dietetics," if you please. Naturally, the official of the club who spotted him recalled definitely the experience years ago, and as he happened to be a newspaperman, remembered the hasty going out of town that night years ago. The funny thing is, that he came in under the same name that he used the first time, although, as stated above, he had changed the name of the "organization" carried around under his hat.

If the Editor has time and feels like it, this series may be extended from time to time in future issues of the *Bulletin.*

* * * *

THE NORTH CAROLINA STATE BOARD OF HEALTH CODE OF HONOR

Since the very beginning of its existence, sixty-two years ago, the guiding principle of the North Carolina State Board of Health has been honest scientific service in the interest of the people of this State. The majority of the men who have officially guided the destinies of health work from the first have accepted as their first responsibility the protection of the public health. It has not always been easy to do. There have been times when some of the high officials of the Board have been cold and unappreciative of the service of some of the more self-sacrificing workers in its own employ, but not one time has the public interest ever been betrayed. There have been times when minor officials have held temporary influence and power, but generally for only a limited time.

The great guiding principle of the high officials of the State Board of Health has always been to deal with absolute fairness and frankness with the public, to play no favorites, and

to give the truth, all the truth, and nothing but the truth to the public in matters affecting the public health interest. Some of the present officials were unfairly criticised in 1935 when an epidemic of poliomyelitis was present in some portions of the eastern part of the State. The officials stuck to their guns and followed their course without bias or prejudice. In the terrible influenza epidemic in 1918 and again in 1919, the same policy was pursued. In frequent outbreaks of such diseases as typhus fever and other diseases calculated to arouse widespread fear in the public mind, the same fair and open policy has always been followed.

We feel, therefore, that the readers of the *Health Bulletin* will join us in taking a pardonable pride in the two samples of editorial comment which we quote below, and which we are very proud to acknowledge. The first is entitled INFORMATION and was quoted from the Raleigh *News and Observer*, June 22, 1939, and is as follows:

"Restraint in the State Board of Health's public warning against indiscreet holiday excursions into areas where the scourge of infantile paralysis exists indicates as clearly as the text the intent of the State health agency to do nothing that will complicate the situation by hysteria.

"It would seem in reason that no such warning would be necessary. But as matter of hard experience, health officers and thoughtful citizens know better. In exact terms, the statement issued this week by Dr. Carl V. Reynolds, State Health Officer, was double-barrelled. He urged, first, that North Carolinians refrain from going or carrying their children into areas where there is an unusual incidence of infantile paralysis; second, he expressed the hope that residents of such affected areas would refrain from coming to North Carolina.

"The impressiveness of this warning on the eve of the usual July 4th holiday period, lies in a very large measure in the splendid record of candor which has characterized the public relations of the North Carolina Health Board. A system of prompt reporting with the accurate and speedy dissemination of the facts as a routine matter of vital public information is credited, back in the influenza epidemic of 1918 and subsequent epidemics of milder types, with having saved the people of the State from the maximum of suffering. The same practice prevailed during the infantile paralysis outbreak in this State a few years ago when the incident was largely confined to Wake and Johnston Counties.

"In all these, the State Board of Health functioned in accord with the highest concept of public duty.

"When it undertakes now as it did then to supply the public with all the pertinent information in its possession, giving the public the benefit of the best professional advice available, and urging the public to avoid unnecessary exposure, it is serving the best interests of the State as a watchful guardian and conserver of the public health."

The second editorial is quoted from the *Statesville Landmark*, of June 15, 1939, and is entitled NO REASON TO AVOID US:

"In 1935, when there was somewhat the semblance of an epidemic of infantile paralysis in North Carolina, Dr. Carl V. Reynolds, State Health Officer, was beset on all sides to pipe down on publicity concerning it. It was just about to ruin the tourist business in Western North Carolina. But Dr. Reynolds held that more was at stake than dollars and went ahead with his program of fighting poliomyelitis with every weapon at hand. If the publicity hurt, that was just too bad.

"Likewise, when those vitally interested in a popular South Carolina seashore resort asked Dr. Reynolds to advise North Carolina patrons that there was no need to be apprehensive because of the epidemic in other parts of South Carolina, he refused to give the green light for reasons that to him seemed sufficient.

"It is this sort of hewing to the line, let the chips fall where they may, that enables Dr. Reynolds to say with reason at this time that

North Carolina has little to fear from such an epidemic. The strenuous measures taken in 1935 have bulwarked us against the disease in 1939, to the point that 'on the percentage basis only 8 per cent of our people are susceptible, this being far below the average number of susceptibles which would justify us in anticipating any epidemic, or even an endemic.' The words of Dr. Reynolds.

"Because Dr. Reynolds insisted on frankness in dealing with the 1935 situation, when such frankness conceivably hurt, his declaration now that there is nothing approaching an epidemic in North Carolina, should be all the more reassuring to the people of the State and to those outside who, for some unknown reason, were about to chart their vacations away from North Carolina. Floridians, in particular, had been advised to avoid North Carolina, on the pretext that an epidemic of the disease exists within our borders. If they could know Dr. Reynolds as we know him here in North Carolina, it would not be hard to believe him."

* * * *

THE HAY FEVER PROBLEM

For the next three months, numbers of people may expect to suffer from hay fever in one form or another. Most of these attacks are caused by the common ragweed. According to some authorities, there are more than one hundred varieties of that pest, botanically speaking, which may produce the pollen which causes so much mischief among susceptible people.

According to the house organ of one prominent drug house, these weeds may range all the way from a cocklebur to a marsh elder. The most of the trouble, however, comes from the ordinary type of common ragweed, in this section of the country known as the Southern ragweed. If complete destruction of all forms of the ragweed could be brought about in the month of July every year, there would be little hay fever in the late summer and fall in North Carolina. So far, this ideal has been impossible to achieve. The ragweed is prolific and bears a large amount of seed and spreads rapidly under favorable circumstances, and those circumstances are generally present from one end of this State to the other, with very few exceptions.

Eradication of ragweed may be compared to the eradication of rats in a town. In a town of 10,000 population and overrun with a plague of rats, the Biological Department of the Federal Government cooperating with the States have many ways to put on rat campaigns and practically eradicate the breeding places and destroy the rats. One thing, however, is necessary. Every individual citizen in the place must cooperate. If all the people in every residence and all the business part of town do their part, save one place, maybe an old warehouse or maybe a store, that is left out, within a few weeks the rats will be just as plentiful as ever. You remember about the rotten apple ruining the whole barrel.

If all the tenants and lot owners in every town and the farms surrounding could thoroughly eradicate the ragweed before it blooms and eradicate it out beyond the range of the winds, protection would be secured, but if one lot remains on which the weeds are undestroyed, every susceptible individual in the whole town will sooner or later become infected before the fall is over. The infection, however, may be reduced by each individual citizen cleaning up his own surroundings and inducing his neighbors to do likewise. If this could be done, much relief would be experienced in such neighborhoods.

This is one plague we cannot blame on Europe or Asia. Most of our crop and fruit plagues have been imported, but ragweed is one of our

own products and is strictly a native plant.

For the most modern treatment of this condition, both preventive and curative, the reader is referred to any good competent practicing physician who, it is hoped, will do the best he can.

* * * *

THE HANDICAP OF DEAFNESS

Elsewhere in this issue we are publishing a summary prepared by Mr. Richardson, of this office, of the reports made by Miss Thompson in her work for the last two years in the schools, utilizing machine testing in an effort to locate deafened children. The figures presented by Miss Thompson are impressive and should be carefully considered by parents and school authorities throughout the State. As she points out in her conclusions, the percentage reported as suffering from deafness is too high. The percentage is given as 8, when the more nearly correct figure of seriously deafened children would be about 5. Even if it were not more than 4 children out of each 100 enrolled in the schools, the sum-total would be of staggering proportions. There can be no doubt of the fact that a much larger number of children suffer some degree of deafness than is usually believed.

As every deaf person knows, deafness is a calamity and is one of the worst handicaps that a human being can struggle against. Many people throughout the world are both deaf and blind and without exception the verdict of such people is always emphatic that the affliction of deafness is much worse than that of blindness. When deafness exists to the extent of 50 per cent or more in both ears, the individual so suffering is simply out of the scheme of things when it comes to living a normal life as other normal individuals do. The handicap is a severe one from a social standpoint, but more important from the standpoint of making a living, to say nothing of an attempt to achieve even mediocre success in life. About the only occupation that a deafened person can carry on equally as well as a person with normal hearing is in the field of writing. At that, such a person is greatly handicapped when having to compete with the person of normal hearing.

We consider the work that has already been done with the audiometer in the schools as one of prime importance. It is a work that must be carried on and extended into all areas of the State. It will serve to draw attention to school authorities and to leaders in every community of the necessity for locating partially deafened children at as early age as possible, in order that every effort known to science may be utilized to treat such children to overcome the handicap with some degree of success. It is also important to locate them early, in order that preventive measures may be adopted which may prevent the further development of what is called "progressive deafness."

* * * *

PREVENTABLE DEATHS FROM DROWNING

The terrible accident in the Neuse near Raleigh a few days ago served to emphasize for about the one-millionth time the large toll among young, active people every summer on account of drowning. The accident referred to was the drowning of three healthy, able-bodied young bus drivers at a point in the Neuse River near Raleigh, where numerous deaths from drowning have occurred before in years gone by. It was the usual story—one of them got beyond his depth in a whirlpool, the other two

went to his rescue, and all three were drowned.

A wiring off of this particular place might serve to warn other people for a while, at least. Most people who lose their lives from drowning are good swimmers. They take unnecessary chances in streams with which they are not familiar, and the result is tragedy, not only for the individual whose life is lost, but for his family and dependents.

Last year 120 people died on account of accidental drowning. In the month of May, this year, 14 deaths from drowning were reported. In this connection it may be well to repeat that not a few of the deaths from drowning occurred as a result of reckless persons diving into shallow water, which result in broken necks, with immediate death and drowning, before anyone can rescue them.

The Editor of *Southern Medicine and Surgery* in his June issue has an editorial on this aspect which says better and in fewer words what we have in mind. We quote from Dr. Northington's editorial column as follows:

"Regularly, about this time of year, we anticipate that a good many reckless persons will kill themselves by diving into water that is assumed to be, but is not, deep. Regularly, we look for same warnings from health officers. Regularly, we write an editorial urging doctors to tell the families who look to them for health guidance never to dive into a pool, a river or a creek without first going in and finding out that it is deep enough. Even if one has been in that same water the day before, currents may have filled it in or a log may have floated down.

"Last Sunday and Monday three young men in North Carolina broke their necks in this way. Maybe there were more.

"Family doctors do not have the opportunity the health officers have. We wonder that health officers do not have newspapers publish such warnings weekly, beginning about April 1st and continuing through September."

* * * *

SOME OF THE MIDWIVES' DIFFICULTIES

The people of the State have heard a lot in the last few years about midwives. We have published a great many items in these columns describing the midwife situation in North Carolina during the last few years. Most of our writing has been of a sympathetic character toward the midwife, but at the same time we have fervently hoped that the day would come after a while when the midwife service would no longer be needed in the State. The ideal situation would be a hospital bed for every birth, with a competent physician in charge. That stage will probably not be reached in many generations. At the same time, some efforts may very properly be directed toward that ideal.

We have pointed out in these columns from time to time that the midwives serve a rather large class of the most sordid and poverty-stricken people that the State has and a rather large number of them. The files are full of pitiful communications here from the midwives in many parts of the State who have written here to know if there were not some way they could collect a little something for their services. Naturally, there is no law to help them in that respect. Most of these midwives serve for very small fees and many of them never collect it at all. While the service of many of them is not worth much, it does help a little and it is better than no help at all.

One of our nurses at work up in the hill country comes along now with an entirely new description of some of the midwives' difficulties in that particular county. This nurse says

that she is now at work in a county having an organized whole time health department but which she worked in before that was organized every year for several years, working with the midwives, giving them instruction and trying to assure the patients they serve safer and more satisfactory care. She says that the last year she worked was three years ago, before the county health department was organized. The nurses in the county health department and the health officer have done their best with the situation but as always it is difficult.

Our nurse has come across two old and feeble negro midwives whom she had instructed to retire and work no more on her last visit three years ago. The nurse finds them still at work this summer and both worried on not knowing how to "unsign" themselves from their obligation. She says she found that the midwives had been forced to obtain permits from the county health department to work a little longer, that they had been forced to do this by some of their patients in a remote section of the county whom they served repeatedly year after year without any pay whatever. Some of those expectant fathers had come to these old, helpless negro women and told them that they would indict them and put them in jail if they did not come on and attend their wives free of charge just as in the past. The helpless, old women fearing "jail" and "the law", knew nothing to do but to go ahead and do the drudgery again for these contemptible, no-account men in their section.

This is a new angle to the midwife situation which we feel sure will be interesting to all of our other county and city health departments, especially those in more favored sections. It is hard to believe that this county in which midwives attend about 25% of the white births and about 50% of the negro births is less than 100 miles from Guilford County where 99% of white births are attended by physicians and nearly 80% of the colored births also are attended by physicians. It is hoped that the county health officers will exert themselves in the future to see that no midwife is allowed to work except she is physically and mentally competent and reasonably well equipped and has sufficient experience. It is certainly hoped that the health officers will protect the old ones who should be freed from such pressure as the nurse has found in the county referred to above.

The nurse reports that not only in different sections of the county in which she is working but also in a few other counties that she has worked in that pressure is exerted to make these ignorant old women believe that they have to "go" because they have a state or county permit to work as a midwife.

Verily, there are many ways to choke a dog to death besides with butter, and there are still many ways to get something for nothing.

* * * *

PERSONAL NOTE

One of our experienced nurses in her weekly report stated that part of a Saturday and the following Monday morning were spent with her dentist getting out a sick tooth and changing the bridge to accomodate the new vacancy. She stated that it was not part of the public health program except on the principle of shoeing the horse for better service on a hard pull. It may be noted that this particular nurse is working in one of our most mountainous counties.

This nurse is evidently old enough to remember the history books in North Carolina some fifty years ago

when as children the older members of this generation were thrilled and awed by the chapter which told about the Revolutionary General getting to the battle in time to save the day just because a young blacksmith had been able to shoe his horse.

She should be able now to put a good deal of fervor in her teachings on oral hygiene.

The Service League of Greenville

By MISS HENNIE LONG

AN organization which promises to be a stable factor in the life of its city has lately come into being in Greenville. It is known as the Service League. Mrs. Wyatt Brown has been instrumental in creating among the city's younger women interest in the broad type of social service for which the Service League stands. Under her wise and able direction, the League was chartered and organized in October, 1938. Actual organization of the Service League followed a year of service to the needy of the community through the medium of the Thrift Shop. Mrs. Brown was the first director of the Thrift Shop, with the following Advisory Board: Mrs. J. H. Blount, Chairman, Mesdames W. E. Hooker, T. A. Person, J. L. Hassell, E. W. Harvey and J. S. Everett. Upon its organization, the Service League took over the Thrift Shop, which has continued operation as one of the group's two foremost projects.

The Dickinson Avenue Branch of the Guaranty Bank & Trust Company generously provides quarters in their building for the Thrift Shop and Service League office. The Shop carries clothes for adults and children and a few toys and household articles, any of which might be purchased by the needy at only a fraction of their actual value. The charges are made very small, in order to help the purchaser. The small charges are made with the idea of giving the purchaser the respectable feeling of being a buyer rather than an object of obvious charity. The Shop is recommended to the needy by the County Welfare Officer or friends of the League. It is not advertised. It has had approximately two hundred customers from October, 1938, through May, 1939. The merchandise offered for sale is given by people throughout the community. The dry cleaners of the city cooperate by cleaning the clothing, without charge, before it is sold. In spite of the fact that the public has been most generous, the calls for children's clothes and shoes during the past winter have exceeded the supply. Seemingly useless things are often valuable to those who come to the Shop to buy. One Shop worker told of the excitement of a Negro customer when he spied four cracked plates offered for sale for a penny. Being unable to afford even the cheapest china sold at the stores, he exclaimed in glee over the four-for-a-penny plates, "Lawd, come 'ere an' look, Mandy! I'm gonna get some o' these!" Then he exclaimed, "I'se tahd o' eatin' my t'eat outen de pot."

The other most important project is the Hospital Bed Space. In cooperation with the Duke Foundation, which pays one-third of the expense, the League provides continuously, in the Pitt General Hospital, one bed space for those in the community who need but can not afford hospitalization. The space is available to any patient in the county who is

recommended by his or her attending physician and passed upon by the Hospital Bed Committee. It is offered to white and colored alike. Patients occupying the bed are given medical care by the hospital staff without additional charge. This project was adopted by the League in February, 1939, and the bed space has been occupied since that time. Although the Service League discontinues its work during the summer, it will provide the bed space throughout its inactive months. The public's interest in this project has been manifested by its continual patronage of the entertainments the League has given for the maintenance of the bed space, and also by donations to the Bed Fund.

At its annual luncheon meeting which was held in June, the League dedicated its bed space to the memory of the late Dr. Charles O'Hagan Laughinghouse, the dedication to be designated by a suitable marker at the hospital. This action was taken in grateful appreciation of the life, ideals and work of the late Dr. Laughinghouse, and also in acknowledgement of the effective leadership of his daughter, Mrs. R. C. Stokes, Jr., as first President of the Service League. The success the organization has attained during its first year of activity is largely due to her inspiration and ability.

Other officers for the year have been the Vice-President, Mrs. W. L. Harrington; the Secretary, Mrs. L. E. Babcock; the Treasurer, Mrs. Tyson Bilbro; the Projects Chairman, Mrs. Wyatt Brown; the Placement Chairman, Mrs. J. B. Cummings; the Finance Chairman, Mrs. H. L. Ormond; the Publicity Chairman, Miss Hennie Long; the Thrift Shop Chairman, Mrs. A. J. Moore; the Hospital Bed Committee, Mrs. R. M. Garrett, Chairman, Mrs. T. A. Smott and Miss Bessie Brown.

The League has engaged in several other projects which involve less time, work and money than the two already mentioned. It assisted materially with the city's Community Chest and Red Cross Drives, and its Christmas sale of Red Cross Seals. It made possible and sponsored a short course on home-making and buyermanship, which was given at the Cotton Mill Village for its women by Miss Katherine Holtzolaw, head of the Home Economics Department at East Carolina Teachers' College, and a few of her senior students. It assisted with plans for the Community Christmas Tree and handled the Community Christmas Baskets through its office. Mrs. Lee Folger and Mrs. W. L. Whedbee, League members, headed the sale of Red Cross Seals and the Christmas Basket project respectively. The League has assisted Dr. N. T. Ennett, Pitt County Health Officer, at the county's free maternal and child health clinics, particularly by providing transportation for patients on clinic days.

The Service League of Greenville promises to develop into an organization whose services will be indispensable to the welfare of its community. It is composed of forty-five active and prominent younger women. It anticipates increasing its membership and activity during the coming year.

Many School Children Have Defective Hearing

By W. H. RICHARDSON, North Carolina State Board of Health

EIGHT per cent of the North Carolina public school children examined in the State Board of Health's hearing conservation program were found to have a measurable hearing loss, according to a report just made public by Dr. G. M. Cooper, Assistant State Health Officer and Director of the Division of Preventive Medicine, under whose direction the tests were made by Miss Margaret M. Thompson, audiometer technician.

During the school year now drawing to a close, 26,240 children were examined, these tests covering all the schools of High Point, some in Gaston County, the elementary schools of Greensboro, all in Rocky Mount and Goldsboro and some in Wayne County. Last year's examinations included 14,727 children, making a grand total of 40,967 for the two years the program has been in progress.

In her report to Dr. Cooper, which has just been released by him, Miss Thompson said:

"On the whole, the school principals seemed most cordial to this work. Many of them were emphatically in agreement with the need for it."

After discussing certain details deemed necessary for a follow-up campaign, Miss Thompson continued:

"The work of these two years has brought this very important matter of hearing conservation before a large number of school people, parents and health workers. I feel that as more publicity is given the work carried on in other places, and as the results of follow-up work can be shown from the work done in this State, there will be a demand on the part of the people of the State for this work to be put on a permanent basis in individual cities and counties. A beginning has been made in North Carolina, but it is still in the pioneer stage and we need to keep on working to get people 'hearing-minded'."

Miss Thompson reported to Dr. Cooper that:

"The figures for the number of hard-of-hearing children is in nearly all cases higher than it should be, due to the fact that I have almost never gotten 100 per cent of those who showed a hearing loss on the first test back for a re-test, due to absences or other causes. Because around two-thirds of those showing a loss on the first test will show no loss in the second test, that factor may make quite a difference.

"In the colored schools, where the absences are much greater, the figure for hard-of-hearing children is correspondingly higher than it should be. Of course, other factors, such as incidental noise, lack of concentration, etc., enter into a much less degree.

"I have always tried to make it plain that this is not an absolutely sure means of testing hearing, but rather a screening test, although if the loss still shows on the second year, we can make fairly sure of it. Losses practically always reached the peak in the fifth grade," Miss Thompson said, "and several principals gave me as their reason for this that fifth grade children are just entering adolescence and less settled down and less apt to concentrate than at any other period in their school lives."

Giving other interesting observations of this work being carried on in the North Carolina schools by the State Board of Health, Miss Thompson continued:

"The ratio of repeated grades was figured on the number of grades repeated. It, as well as all figures, does not represent 100 per cent of the total number of children tested, for I never got answers from every child to every question.

"The number of tonsil operations varies widely, due mostly to economic conditions, I believe. For those towns in which I tested colored schools, the figure for tonsils-out is lower,

as the percentage of tonsil operations reported from colored schools is far below the average.

"The figures for 'doubtful cases'," she went on, "are higher for the first year's work than for the second, due to the fact that at first I included in that class all children who reported having running ears at the time of the test."

Greenville Service League Hospital Bed Dedicated to Memory of Dr. Laughinghouse

Recently the Service League of Greenville, a public-spirited organization of young women who are vitally interested in community betterment, dedicated a hospital bed in the Community Hospital of that city to the memory of Dr. Charles O'Hagan Laughinghouse. Elsewhere in this issue we are publishing an article describing the organization and work during the first year of this League. Mrs. Helen Laughinghouse Stokes was the first President of the League, and its members decided to dedicate a free bed in the hospital, the expenses of the occupant of the bed to be borne by the League in memory "of the outstanding life and work of the late Dr. Charles O'Hagan Laughinghouse, and in appreciation of the capable leadership of his daughter, Mrs. R. C. Stokes, Jr., as the first President of the Service League."

Dr. Laughinghouse was a member of the State Board of Health from 1911 until 1926, when he resigned to become State Health Officer. He served as Secretary of the Board and State Health Officer from October 1, 1926, until his death, August 26, 1930. Dr. Laughinghouse had many friends throughout the State, who will be pleased to know of this beautiful tribute on the part of the younger women in Greenville to his memory as a public official and for a long time as a practicing physician of that town. They will also appreciate equally as much the tribute of her associates to his talented daughter.

In language which is better and more expressive than anything the Editor of the *Health Bulletin* can write, the resolutions adopted are herewith quoted for you:

"It has been through the thought and foresight of our President Helen Laughinghouse Stokes and her desire to help ameliorate the sufferings of those less privileged than ourselves that our Hospital Project was conceived, encouraged and has been carried on. She, like her father, Dr. Laughinghouse, realized the necessity of hospitalization of worthy poor in and around Pitt County.

"Those of us who knew 'Dr. Charlie' recall what a fine, unselfish, understanding humane person he was. Always willing to go day or night to administer to the sufferings of humanity.

"We recall also how with others he realized the dire need of a hospital here in Pitt County, and how earnestly and untiringly he worked to make Pitt Community Hospital a realization.

"And so at this time, at the wish of every member of the Service League, it seems fitting and proper, and it is our pleasure to dedicate the bed maintained by the Service League in Pitt Community Hospital 'The Dr. Charles O'Hagan Laughinghouse Bed of the Service League of Greenville, North Carolina.'

"This to be duly recognized by a plaque to hang in Pitt Community Hospital."

NOTICE TO "A READER" FROM WILLOW SPRINGS

Under date of June 5th, the Editor received a postal card mailed at Willow Springs, N. C., and simply signed "A Reader." The writer requested us to publish in the *Health Bulletin* the cause of diarrhea and enteritis. The reader wanted to know what the treatment should be, all about the feeding, medicine, if any, to be given, wanted the symptoms; in fact, wanted all information available on the subject.

The purpose of this notice is to say that we do not have space in the *Bulletin* for appropriate discussion of such subjects, because of the fact that too much space is required. We do want to call her attention, however, to Page Two of the *Health Bulletin*, in which she will find listed a great deal of literature on this very subject. For instance, one of the booklets has over a hundred pages and is known as "Infant Care." Another pamphlet known as "The Prevention of Infantile Diarrhea" goes into careful details in these matters and will be sent free to the writer if she will write and give us her name. This literature is available to any citizen in the State, and during the summer months is available to parents who will follow the suggestions outlined.

Observations on Rocky Mountain Spotted Fever

By DONALD F. ASHTON, Entomologist, Division of Epidemiology
North Carolina State Board of Health

Dermacentor variabilis, the American dog tick, is probably the only vector of Rocky Mountain spotted fever in the central and eastern portions of the United States. In the Rocky Mountain area another species, *Dermacentor andersoni*, the wood tick, is the one which transmits the Western type of spotted fever.

Outside of the Rocky Mountain region, the spotted fever is most prevalent in parts of Maryland, Virginia and North Carolina. It has been reported from thirty-nine of the forty-eight States. The greatest number of cases occur among people engaged in outdoor occupations, as agricultural and forestry workers. Recent experience in this State indicates that neither age nor sex group is immune, but the white race is more susceptible to the disease than is the colored.

The tick is easily distinguished from the insects, in that the body is divided into two portions, cephalothorax (head and chest) and abdomen, instead of head, thorax and abdomen as in insects. There is a strong fusion of the cephalothorax and abdomen producing a sac-like leathery appearance. The nymph and adult ticks have eight legs, while the larvae have six. The adult tick, oval in shape, is very leathery and hard to crush. Its basic color consists of a dark-brown, with a gray pattern. The gray pattern of the female is confined to a shield-like area in front, while the male has a gray pattern distributed over the entire upper surface.

When the female has taken a blood meal she drops to the ground and there deposits her eggs, which often number as many as 6,000. Within about thirty-five days these eggs hatch into seed ticks, or larvae, which seek a small rodent from which to obtain a blood meal. After securing the first blood meal they drop off and moult, becoming nymphs. These nymphs spend the winter on the ground and the next spring seek a larger host on which to feed. They remain on this host for several days, drop off and moult for the second time, emerging as adults. These adults may find a host the same year, but usually it is necessary for them to wait until the following year before finding a suitable host. In most instances, because of hot weather, the adults are forced to seek shelter in moist leaves, resulting in a marked

absence of adults during the summer months.

The adult dog tick has been taken from a great many hosts, including man, cattle, horses, rabbits and the preferred host, the dog.

The larvae and nymphs, as well as the male and female adult dog ticks, require blood meals, and are known to feed only on warm-blooded animals. When obtaining a blood meal the tick inserts its mouthparts into the flesh. One pair of mouthparts has a set of recurved teeth on the end, which enable the tick to hold fast to the host. These hooks may be loosened easily by the tick when it has completed its blood meal. On the other hand, when one finds a tick imbedded in his flesh the tick should be removed as quickly as possible. The proper method of removing such a tick is to grasp it firmly and with a steady pull outward from the point of attachment, gradually remove the mouthparts from the flesh. If the head should break from the body, it should be removed to prevent infection. One approved method for removing a tick is the application of a small quantity of turpentine or kerosene to the body of the tick, causing it to relax its hold on the host.

The bite of the tick is so painless that a person may not be conscious of its presence. For this reason, when one returns from a region suspected or known to be tick-infested, he should inspect himself thoroughly to make sure that there are no ticks on his body.

Investigators have demonstrated that the minimum feeding period necessary for an infected tick to transmit the disease is one hour and forty-five minutes. The average time was about ten hours; infection always resulted after twenty hours.

Rocky Mountain spotted fever is maintained in nature in two ways. The first method is by passage of the virus from the mother tick to a few of her offspring through the egg, thus making it possible for several generations of ticks to be infective without having fed on infected hosts. The second is the presence of the virus in animal reservoirs, such as the rabbit and certain ground squirrels. The rabbit tick transmits the disease from one rabbit to another. When the nymphs of the dog tick feed on infected rabbits they become infected and the resulting adults are able to transmit the disease to man. The dog may also be a carrier, but becomes immune after eight days. This immunity is not permanent, however, since eight weeks after the first infection the dog may again become infected.

Of the two types of spotted fever, the western and eastern varieties, the western is the more dangerous. The western type has a case mortality of about 70 per cent, whereas the eastern case mortality is only about 20-25 per cent.

The symptoms of Rocky Mountain spotted fever closely resemble those of endemic typhus fever. An eruption consisting first of a rash, then open sores, may later lead to gangrene of the skin, due to the breakage of the smaller blood vessels. These symptoms are all accompanied by a high fever.

Should the person recover from a case of Rocky Mountain spotted fever a high degree of immunity is established. No authentic case of subsequent attack in man is known.

A vaccine has been produced which will provide complete or partial immunity in uninfected persons for a short period. A person becoming infected may have the severity of the attack lessened by the administration of the vaccine during the early course of the disease.

Appreciative Reader Would Scream Information from Housetops

Some weeks ago, the Editor received a letter from a reader in Western North Carolina, some parts of which we take pleasure in passing along to all our other readers. She writes:

"I have been an appreciative reader of the *Health Bulletin* ever since I can remember. I have written you in times past for information that was very valuable to me and appreciated very much, and I have also frequently expressed my appreciation for the priceless value of the *Health Bulletin* to anyone who will read it regularly and follow its advice.

"It is necessary to apply all available knowledge to the prevention of disease. Preventing one's illness is one of the most important things that people can do. It requires intelligence and knowledge in the first place, and some people are so ignorant and indifferent, which is the cause of so much of the prevalence of preventable diseases at this time. This is especially true of the venereal diseases. People who carry venereal diseases must be convinced that they must obtain instruction about curing themselves and then take every precaution and abide by the orders of the physicians who are endeavoring to rid the State of these diseases. These people should be made to realize the grave wrong that they are doing to the people and particularly in subjecting the lives of innocent children to such dangers.

"I should like for someone to literally scream this information about the prevention of such diseases from the housetops. I can hardly keep still and keep my mouth shut when I see so much disaster and trouble and suffering all around me as a result of neglect of such diseases."

COMING THROUGH THE MAIL

Some months ago, we received a postal card from a reader of the *Health Bulletin* living in a small town near Asheville. As this communication is a nice example of the type of letters we frequently receive from intelligent young mothers, we are printing it just as we received it, together with a copy of the Editor's reply. Only the names are deleted. The reader's communication follows:

"Will you please send Prenatal Care, Infant Care, the series of letters to expectant mothers, and baby's time cards for the first two years to (a friend).

"You sent me this information several months ago and it has been most helpful in caring for my two babies, thirteen months and two months old. I have advised several other young mothers to secure these publications—I think every mother should study them carefully.

"Why don't you urge all physicians to tell their obstetrical patients how to secure them?"

The Editor's reply:

"In response to your postal card of September 1st, we are forwarding under separate cover to your friend the literature which you request. We appreciate your interest and we are glad to know that the literature helped you with your two babies. We would like for every expectant mother and the mother of every young baby in this State to have this literature and to have time to study and be helped by it, just as you have mentioned. They could all get it if they would ask for it. Quite a number of physicians avail themselves of this service, but many of them are indifferent. We are sorry that this is the case, because the literature is helpful both to the physician and the patient."

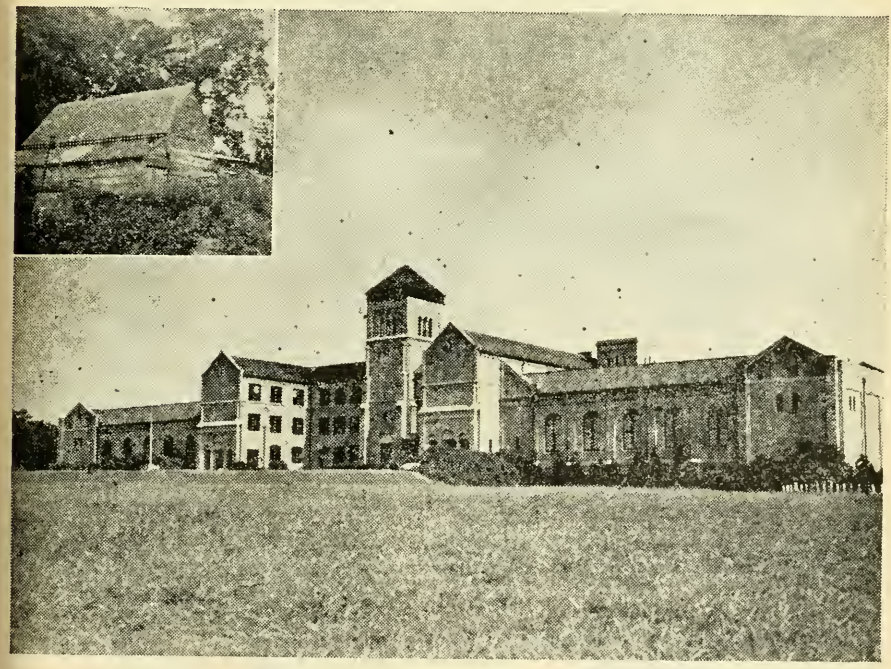
The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

This Bulletin will be sent free to any citizen of the State upon request

Entered as second-class matter at Postoffice at Raleigh, N. C., under Act of July 16, 1894. Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

Vol. 54 SEPTEMBER, 1939 No. 9



CONTRASTS IN VALUES

Forty-three years ago the Editor "graduated" from the one teacher neighborhood school shown in inset. The building cost the county one-half hundred dollars and it is still standing, now owned by a Negro farmer and used as a barn. Forty years later his son graduated from the beautiful high school pictured above. It cost the local taxpayers one-half million dollars.

The contrast in material values is bewildering. The progress in community health protection is equally striking. Can as much be said with reference to personal health? What of the intellectual, spiritual and character developing comparisons? Time alone has the answer.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils
Appendicitis
Cancer
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Chickenpox
Diabetes
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Don't Spit Placards
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Tuberculosis Placards
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Vitamins
Water Supplies
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care
Prenatal Letters (series of nine monthly letters)
The Expectant Mother
Breast Feeding
Infant Care. The Prevention of Infantile Diarrhea.
Table of Heights and Weights
Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Instructions for North Carolina Midwives.

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THE Health Bulletin
PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

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Notes and Comment

By THE EDITOR

AS September is the month in which schools generally open throughout the State for the fall and winter session of eight months required by law for all public schools which are State supported, an effort is being made to deal with a few pertinent school problems at this time. A brief review right here of some of the points emphasized this month may be in order.

Attention is called first to the article by Dr. W. N. McKenzie, entitled "The Work of the School Health Officer." Dr. McKenzie has reviewed some of the difficulties and problems which the health officer must meet and solve. He has also expressed opinions based on his experience with reference to several matters in school health work. Finally, he has mentioned briefly some of the agencies in his county which have been of service in making his school health work successful. Most of the conclusions reached by Dr. McKenzie meet with the hearty approval of the Editor of this publication. Such, for example, as the criticism of the pernicious custom about which more will be said later of placing a premium on perfect attendance, often at the expense of the child's health and the health of other children in the school. The Editor does not agree with the practice of singling out certain grades in schools for examination by the health officer and the nurses as described by Dr. McKenzie. The soundest policy would be to begin at the first grade and go just as far in just as many schools as the time which the health officer and the nurses have to put on it would permit. A satisfactory system would require at least one examination of every child enrolled in the schools every year. Dr. McKenzie's article, however, will be found very interesting and informative.

The address of Col. John D. Langston, a Goldsboro attorney and a longtime public-spirited citizen of North Carolina and an experienced member of the Goldsboro School Board, will be found to possess much information and is literally full of common-sense conclusions. Col. Langston in his address before the dentists went to the fundamentals of prevention as it is considered at this time. Col. Langston's address is passed along in the hope that all school officials and teachers in the State will read it.

It gives the Editor a great deal of pleasure to recognize the able work done among the schools in Alamance by the Health Officer, Dr. P. Y. Greene, and his staff, and in the Martin County schools by Dr. F. E. Wilson, the Health Officer, and his staff. Space forbids a detailed report from these two progressive county health departments. The reports of these two health officers are so comprehensive and indicate such a large amount

of work done that a brief review is essential. Alamance and Martin are both comparatively newly organized health departments, but they are setting a pace which many an older health department would be proud to match.

In Alamance County, 12,000 school children were examined at least once. In Alamance every school child has to be successfully vaccinated against smallpox before being enrolled in the schools this year. This has to be repeated every seven years. At present the school children of Alamance County come as nearly being 100 per cent successfully vaccinated against smallpox as those of any other county in the State. The health officer has specialized in personal conferences with the parents of all the children found physically defective in the school examination work. He has therefore been able to get an unusually large number of corrections done.

In Martin County, the health officer reports that systematic and complete examinations were made during the first quarter of the present year of 2,314 children in the first, third and sixth grades of the Martin County schools, the examinations being made by the health officer. He found 57 per cent to have physical defects. Only a small percentage of the children were found to be entirely free of any handicaps. Of the total number of children examined, 1,156 had repeated one or more grades, 132 of them having repeated three or more grades. A special study of these repeaters was made and the health officer found and reports that 67 per cent of the chronic repeaters had preventable defects which, had the defect been corrected early enough, might have prevented the necessity for repeating grade work. The health officer reports that no effort was made to study mental deficiencies in the examinations and of the physical defects decayed, infected teeth and poor vision headed the list. Infected, enlarged tonsils and adenoids with associated diminution of hearing were responsible for many of the defects. The health officer reports that the physical condition of the colored children was slightly better than that of the white children examined. Dr. Wilson closes the brief report with the following significant paragraph:

"It is thus found that if each individual family could receive adequate medical attention there would be an enormous increase in individual and community health, more strong and able-bodied citizens to attend to the things of life and government, and an increase in the well-being of society. It is recognized that these conditions can be bettered only after a definite health consciousness has been built up by appropriate health education. Who knows how much mental deficiency is caused by physical handicaps? We will leave this question open as something to think about."

* * * *

Sometime ago, the Editor received a letter from Dr. W. C. Davison, who is not only Dean of the Duke Medical School, but who is one of the noted pediatricians of the United States. Dr. Davison and his friend, Dr. Arthur H. London, a practicing pediatrician of Durham of wide reputation and experience in this State, had just attended the school commencement exercises in the Durham schools which Dr. Davison's young son had attended. Dr. Davison's letter was so concise and at the same time comprehensive, and expressed so well his own distress and that of every thoughtful physician about the matter of forced attendance of school children in an effort to achieve a perfect record, that we requested permission of Dr. Davison to publish his letter exactly as he wrote it. He has consented in the hope that it

might aid in bringing about some material changes on the part of the people who lay down the laws and the rules and regulations and the practices of the school system as the parents in this State have to take it. We commend Dr. Davison's letter, which follows, to the parents of all school children:

"I have just attended the commencement of my small son at the Durham School and felt, as Dr. London and I have often suggested to parents, that the eulogy and certificates which the teachers give these youngsters for perfect attendances, is dangerous from the public health standpoint. Certainly, no child of my acquaintance ever went through the year without some minor illness which would be a source of infection to other children, yet these youngsters are encouraged by their teachers to attend school every day. Furthermore, in awarding scholarship prizes, they penalize those who have had several absences, even though their scholastic rating was higher than that of the children with a perfect attendance. The system of allotting teachers to schools on the basis of pupil-days, instead of pupil enrollment, increases the spread of respiratory infections, because many mothers do not realize the risk in urging the attendance of children who have 'just a slight cold.' If these children were kept in bed at home at the onset of the illness, recovery would be more rapid, contact cases would be avoided, and the pupil-days would be increased. I know that you agree with London and me on this subject, but do you think it would be presumptuous for me to write to the Superintendent of Schools about it?"

Last Call

Sanitation at a Bargain With Double Profits Accruing

By WARREN H. BOOKER, Director, Division of Sanitary Engineering

MUNICIPAL water and sewer extensions are on the bargain counter, but the offering may not be for long. Many towns have taken advantage of the WPA to get their water and sewer lines at 20 to 30 or 35 cents on the dollar, and are making enough money from water sales to pay the sponsor's part in from five to ten years, or less.

But now the picture is changing. Many municipal officials noted with interest that no provision has been made by Congress for the continuance of PWA, and that appropriations for WPA have been reduced about one-third. From this it would seem that WPA water and sewer extensions will be harder to get in the future than they have in the past.

These water and sewer extensions have several far-reaching beneficial effects. From the City Manager's financial point of view, these cheap water and sewer extensions enable the water works department to sell a great deal more water, and at such a handsome profit as to enable the sponsors to pay for their part of the cost of the improvement in just a few years. While this is a direct profit, from a public health point of view, it means getting rid of all privies and questionable private water supplies within corporate limits of these towns. This means even larger dividends in greatly reduced death rates and sickness rates. Hence those towns fortunate enough or shrewd enough to take advantage of these opportunities are getting a double profit—a direct profit on their water sales, and an indirect but far greater profit in better health conditions.

It will be appreciated that those who already have their water and sewer connections in a partly sewered town are not receiving the degree of protection to which they are entitled as long as there is a fringe of old

privies and equally questionable private well supplies around the outer edge of town. From these homes with this fringe of privies oftentimes comes the maids, cooks, servants, nurses and others to work in the best sanitated homes in the town.

Fortunately, in an ever-increasing number of towns these old relics of insanitation are rapidly vanishing. Many health workers take the position that no privy has any social or sanitary standing within any incorporated municipality.

Already a number of towns are boasting that they are either "100 per cent watered and sewered," or that they have WPA projects now under way which, when completed, will make 100 per cent of their homes accessible to water and sewer lines. Among those towns claiming such degrees of sanitation may be mentioned: Roanoke Rapids, Nashville, Siler City, Mount Airy, Henderson, Ramseur, Liberty and others.

Quite a number of other wide-awake towns are taking rapid steps to get their house in order and to embrace this opportunity, which may be the final opportunity of getting 100 per cent of their homes accessible to water and sewers at a cost of only a fifth to a third of the total actual cost.

In the opinion of this Board, no better WPA project could be offered than that of sanitating cities and towns, and closely built-up areas just outside these cities and towns where the homes can be served by means of water and sewer lines from the municipal system.

A Non-Taxing Source For Our Schools

By COL. JOHN D. LANGSTON, Goldsboro Attorney

(Address to School of Public Health Dentistry, University of North Carolina.)

I AM glad of the opportunity to talk with a group of public servants, who are paying dividends to the State immeasurably beyond operative costs. I have watched with great interest the constructive work your group has in a few short years accomplished in transforming debilitated children into bright-eyed boys and girls who will some day take their proper place in the social and economic life of the State. Sometimes when I look back over my work in my own profession, where, as Walter Siler would say, we make our living by the sweat of our tongues, I envy the opportunity you have in recreating the lives and hopes of human beings, because I regard service to the body and mind as having no peer save in the spiritual field with which it is closely allied.

I think I am one of John Johnson's converts. Having offices on the same floor with him in Goldsboro, I have for more than twenty years witnessed his sacrificial efforts to relieve the ills of people, and educate them in matters of health, with relative disregard to matters of money or pay. And his high conception of professional service which regarded compensation as only a minor, even though necessary, incident has been an inspiration to me and engrafted in me a greater love for service to those about me. I once said that John Johnson has completely disrupted my boyhood theology, because I felt sure that whatever or wherever Heaven may be he will get there, and at the same time I knew he would not be happy there unless surrounded by a group with tooth ache

or other ailments to whom he could minister. And I know that Dr. Branch will be rather disconsolate in any Haven of Rest, unless he can put on a program of Oral Hygiene with graphs and charts showing progress.

You can mark this truth down, that if progress is to be made and maintained in various avenues of State life, it must be through men of vision, and men who do not interpret values in terms of net savings in dollars and cents.

It is the short-sighted groups in my profession that have blocked and delayed constructive programs designed to aid through legal clinics the procurement of justice for those unable to properly present their causes.

It is the short-sighted groups in your profession and in the medical profession that look with alarm upon constructive programs designed to furnish adequate medical service to every man, woman and child unable to pay for it, and to eradicate through public service those diseases that constitute a common menace.

What these groups need to learn is what the leaders in your profession learned long ago: A public that is not health conscious does not become a continuing source of income. The health conscious man, even though reasonably healthy, maintains his constant contact with his doctor, or his dentist, for check-ups, and thereby keeps the business of the profession on some level basis. And by keeping reasonably healthy his earning powers are not decreased and he is enabled to pay the bills. Keeping the sick poor and the poor sick is not a sound principle of economy.

It is also true in my profession that if at a present loss of fees I can help put a man on his feet, I have a future client, able to pay his bills, and conscious of the value of legal services.

I congratulate you and the State upon the advances you have made under the handicap of insufficient State support. I am grateful with you, however, that the State is becoming more health conscious. And it is my conviction that the time is not far distant when our Legislatures will tell you to write your own ticket for what you need to eliminate remediable diseases and their terrific and unnecessary cost to our school systems.

In 1920 Cameron Morrison demonstrated that one hundred millions in roads could be built without cost to the State. The motorists paid the taxes to retire the bonds, but the paved roads saved corresponding values to the motorists' cars. The car savings simply went into the road construction cost.

It is equally demonstrable, that the State can appropriate and spend one million dollars annually on our health program without cost to the State. This can be demonstrated in connection with our schools alone, and without regard to the saving effected in the general economic life of the State.

I make this assertion, that if the State School Commission were authorized to transfer from the School Fund one million dollars to the State Board of Health for the maintenance of a comprehensive Health Program in all public schools similar to the intensive work that has been done in some schools through the Division of Oral Hygiene, the one million dollars would before it was spent be shifted back into the General Fund through savings to that fund effected by the elimination of repeaters and other costs incident to health conditions.

Approximately 34 per cent of the pupils in our public schools in 1934 were repeaters; that is to say, they failed to make their grades and had

to be taught a second year in the same grade. With a total enrollment of over 800,000 pupils, and an average attendance of about 700,000, approximately 238,000 were repeaters. The cost of instruction was thereby practically doubled as to such repeaters. As I have stated, there has been considerable improvement due to the fine work of the State Board of Health, handicapped as it has been by deplorable lack of funds. And the improvement will be more marked when some of the medical profession get over the scare that the State's efforts to control remediable diseases is going to create too healthy a public to be of benefit to the private practitioner. If I were a doctor I would prefer in my clientele one healthy man appreciative of the need to stay healthy to two sickly persons with diminished earning capacity.

Based on the 1934 survey, the annual loss to the State, and directly to the school budget on account of repeaters, would be more than four and one-half million dollars. This is arrived at by multiplying the instruction cost per pupil of $20.00 by the number of repeaters 238,000. I concede that this figure is too large, because of other factors entering into the determination of per capita cost. Assuming, however, that the 1934 survey showed an unprecedented condition, and also that the repeaters were not continuous as to successive grades, and making due allowances for error and misinformation, I think I may safely accept 150,000 as to the minimum figure for annual repeaters in our school system. This would represent an annual loss to the school budget of $3,000,000, or more than the liquor tax, or nearly as much as the income tax, and about one-fourth as much as the sales tax.

The best medical and dental minds agree that at least 50 per cent, possibly 60 per cent, of those repeaters can within a ten-year period be eliminated by a vigorous, continuous health campaign through our State, with the co-operation of the parents.

I referred to a one million dollar appropriation for purposes of illustration. However, the annual cost of such campaign need not exceed $250,000.00. The expenditure of this amount would more than be repaid the first year, in the elimination of repeaters, and the saving to the school budget would increase annually as a new crop of children came into the schools, and the older defective groups passed out. Of course, it would take about ten years for the maximum effect to be accomplished.

A study of the causes of repeaters makes the case clear even to the lay mind.

In the first place, only a very small percentage of repeaters (about 15 per cent) are due to inherited mental weakness. The remainder are definitely traceable to preventable physical troubles and infections that occur in early childhood, and which bring about diseased conditions that continue their devastating effect upon the child mind during the successive school grades.

In the second place, the largest contributing cause is the teeth. Regular school examinations and clinics carried out in all districts with the same thoroughness that they have been carried out in some districts will remove this cause to a large extent and constitute a fine educational course as well.

The Mouth Health Survey of the North Carolina Public Schools in 1934 shows the following startling facts:

84 per cent of enrollment needed dental attention.

82.5 per cent needed permanent teeth filled.

60 per cent needed deciduous teeth filled.
56.5 per cent needed extractions.
55.3 per cent were never in a dentist's office.
34.6 per cent were grade repeaters.
17.3 per cent were classed as Grade A.
49.9 per cent were classed as Grade B.
29.5 per cent were classed as Grade C.
12.3 per cent were unclassified.

In the third place, the next largest contributing cause is the tonsils and adenoids. Similar regular examinations and clinics would show here and have shown amazing results in taking pupils out of the repeating groups. I have known a number of cases where the children, listless, inattentive and unable to do the school work on account of a system poisoned by diseased tonsils, became bright, healthy pupils within a few months after the tonsils were removed.

These are the two main poison sources that prevent the child mind from properly functioning in the earlier grades, bring on later organic diseases, and cost the State annually several millions of dollars that could be saved and applied to school needs.

If the pupils are not able to have the necessary preventive and curative work done, it would pay the State to have the work done without cost to the pupil.

Why should the State lose several millions annually to save an annual outlay of $250,000.00? Then, too, the saving would increase from year to year, while the outlay would tend to decrease as physical conditions improved.

This is no private question. It is a public question in capital letters. It need not alarm the professions affected. It is an education in health promotion that will give these professions a future better business. The ignorant man or child goes only to his dentist rarely when he has a painful abcess. The intelligent man or child consults his dentist regularly. It is also a tax-saving question. It is a question of transfer of double-cost groups of school children to single-cost groups, with the attendant transfer of the saving to teachers' salaries, increased school term and other essential improvements in our school system.

Too much attention has been paid in the past to the revenue ends of public questions and too little attention to the saving ends.

But after all, the real vital question is: Whether a higher, a more effective citizenship may be evolved, by carrying out a full program instead of a pinch-penny one. The health of our State should never become secondary to our roads.

I want you to know that the Board of Trustees of the various schools of the State are deeply appreciative of your untiring efforts to make real the demand of Charles B. Aycock that equality of opportunity be given to our boys and girls. I want you to know that the Parent-Teachers' Organizations of the State are applauding your achievements. I want you to know that the citizenship at large is having its eyes opened to the moral values as well as the material values wrought out through your progressive programs. The fight for health has been long and arduous. Duty's highest compliment to man lies in the greatness of the tasks she assigns to him. The poet Tennyson, however, gives to him a vision of the compensatory reward when he says:

"Not once nor twice in our rough island story
The path of duty was the way to glory.
He that walks it ever thirsting for the right,
And learns to deaden love of self,
Shall find before his journey closes
The stubborn thistle bursting into glorious purples
That out redden all voluptious garden roses."

Childhood Imagination—Why Encourage It?

By JANE ZIMMERMAN (A Student in W. C. U. N. C.)

THE late afternoon sun throws a streak of gold across a little attic playroom. A little girl sits on one side of a low soap-box table and carries on a conversation with her dolly, who sits in a high chair on the other side. Dolly is wearing her best pink organdy dress, for the occasion is a tea. I was that little girl who poured endless cups of make-believe tea. I was the queen of many such scenes, and that playroom was my kingdom.

I recall that scene now, not because it stands out in my memory above all the others, and not just because there is so much pleasure in the reminiscence. I recall and relate it because it is characteristic of happy childhood, and because it is from such experiences that attitudes, ambitions, skills, adjustments and adaptations are made. In other words, it is life in the making.

The young child lives in an imaginary—make-believe world. He is not able to differentiate between the actual and the imaginary. He thinks that all things are real. Santa Claus is real, fairies are real, and the "bogieman" is real. I remember having heard the story of a young child who persistently insisted that Joe, the fat boy of the inimitable *Pickwick Papers* was a real person. When he was asked to prove his statement, he argued that Napoleon was real, because he had seen him in a book; so, too, had he seen Joe in a book, and that made Joe real too.

The person who seeks to understand such childish logic will readily see that the child's confusion had some contact with reality. That is often the case. Sometimes, however, a child spins ideas entirely out of his imagination. He invents companions and gives them destinies. He lives in close touch with them. He goes to adult acquaintances and to them talks of his inventions as if they are real. The understanding adult will know that the child is merely trying to fill a need in his life and that there is no real danger in his method. The tendency to attempt to satisfy needs by creative imagining never entirely disappears; however, all through childhood, the child continues to determine, with increasing discrimination, realities over imaginary creations.

Imagination plays an important role in its contribution to the development of reasoning. It is interesting to watch the growth of this faculty in a child, who not only is interested in helping his mother to plant the flowers, dropping the seeds into the little holes, but wants to know why—why the seeds must be put into the ground to grow more pansies; why they have to have water and sunshine to grow; what "grow" means; and so on endlessly. He really becomes interested in seeking explanations. In other words, he acquires an intellectual curiosity, which is one of the prerequisites of educational growth and development.

Reasoning is sometimes defined as a step in thinking; certainly thinking is the greater term. After closely observing a number of children, I have concluded that as a child's ability to reason develops, his ability to think develops. Last summer I was staying with my little three-year-old nephew. One day he came to me very seriously and asked the perplexing question: "Aunt Jane, where does God live?" For a moment I was at a loss as to what my reply should be; but then I remembered that he had been attending Sunday School; and so

I attempted to answer his question in the light of something which he had heard in Sunday School. My reply to his philosophical question only served to bring forth additional questions. "Did God make Grandma Judy?" "Did God make Daddy?" "Did God make everybody?" "Who made God?" "Where does God live?" "Can I go to see God?" I do not wish to convey the impression that his questions were mere evidences of imagination. They were much more than that. They were the evidences of thinking—thinking which had evolved from his childlike imaginings.

Today modern philosophers are saying that the welfare of society depends upon the individual; therefore, every individual should have a social consciousness. The rise of imagination and associative organization brings about a social consciousness in the child. At first, a child's attention might be directed more actively toward his doll than toward his own family. The story is told of two children about four years old who were vaccinated in their home; while the rest of the family was receiving attention, they went out and returned with their dolls, insisting that the doctor vaccinate them too. If they were to be "kept from being sick," they wanted the same protection for their precious companions.

I can remember very vividly that on recovering from the measles my sister and I turned the playroom into a doll hospital, in which there were thirteen "doll patients," all ill with measles. We, as nurses and anxious mothers, completely duplicated and dramatized everything that had been done for us during our period of isolation and treatment. It is true that a child's solicitude is as apt to be directed toward his dog, doll or favorite toy as toward his mother or baby sister; but the important thing is that his interests are focused on the well-being of someone or something beside himself. The growth of imagination makes it possible for him to transfer and to project his own feelings to others. A child's interest in other persons or things is the basis of social concern.

One of the most serious faults of the parent is his failure to realize the nature of childish imagination. Very often children get into trouble because they come home with stories which nobody could believe. Ada Hart Arlitt in her book, *The Child—From One to Twelve*, tells the story of a little boy who came home and told his mother the story of how he had played with a great big bear at his grandmother's house. His young mother was so horrified that she not only punished the child, but told him that he would grow up to be that most awful of all things—a liar.

An aunt of mine tells of how her little son came excitedly into the house one day with a "big story" of how Bismark, the neighbor's old collie, had put his tail through a hole in the ice on the pond, and had brought out a great fish as long as his two arms. In her desperation, she went to a psychiatrist to see what was wrong with her child. The truth of the matter was that there was ice on the little stream back of the house, the little boy was playing with the neighbor's dog, and together, they had reenacted the scene of the story in which a dog actually used his tail to catch fish through a hole in the ice. Today, that mother is proud that her son had such an imagination in his early childhood.

One should never forget that imagination in childhood is very different from imagination in maturity,

for the simple reason that the young child has had so few experiences that serve as checks on his imagination. A little boy runs into the house with the amazing story that six yellow horses are coming down the street, yellow to him because he has seen so few horses. He sees little men riding along in little automobiles because all men and automobiles look little to him at a distance.

It is easy for the adult to picture objects with which he has had experience. We, as grown-ups, laugh at the idea of pink elephants; and yet, because of the child's limited experience with real elephants, it is quite as easy for him to see a pink elephant as an ordinary elephant.

And, yet, although a child's vivid imagination constantly gets him into trouble, its use is important to everyone, no matter how prosaic he thinks himself to be. Recently, when I was sitting in the office of one of the teachers at a well-known college, I heard her say: "Yes, I love teaching—I've always loved it, ever since the day when I used to line up tin cans on the backyard fence and teach them." When she said that, I let my pencil drop. I thought to myself: "She is a splendid teacher; she is realizing her ambition—an ambition which was born in a make-believe world."

Imagination directs one's inventive capacity. For millions of years, doubtless, birds have been flying through the air; but one day, a man watched the flight of a bird and connected what he saw to the gliders of an airplane. He used his imagination to see beyond the experience which he already knew through actual contact, and as a result, revolutionized transportation in the world. By similar experiences of combining creative thoughts and practical physical labor, scientists have discovered that which has made them scientists, inventors have invented the things which have made them inventors, and artists have created works of art which have given them the right to be called "artists"; and each, in his own way, has made his contribution to society. So from the daydreams of the child have come the practical accomplishments of the adult; and from the day-by-day use of imagination have come the practical day-by-day adjustments of living.

Dr. and Mrs. Groves, in the book which they have called *Wholesome Childhood*, have said: "Constructive imaginings are built of the stuff real life is made of, and lie largely within the bounds of possibility. They provide ambition with fresh impetus. . . . Imagination is a path along which its discoverer travels toward achievement. Daydreams replace unpleasant conditions with their reverse; poverty becomes wealth, weakness is transformed into strength. Imagination would show rather how to convert poverty into wealth, by what road to journey from weakness to health and strength, picturing the delights of riches and power as rewards to be earned, not as dreams to be enjoyed."

Since imagination in the child is so important, and since it remains an active and important force throughout all of life, the wise parent will not do anything to hamper the development of his child's imagination, but will strive to help him use it to advantage. Blessed is the adult who has the opportunity and insight and the delicacy of imagination and response to accompany a little child throughout his fairyland years.

School Health Work—The Health Officer

By W. N. McKENZIE, M. D., Health Officer, Stanly County
(Paper read at State Public Health Association Meeting, May 1, 1939.)

SCHOOL health work has been considered for a long time as one of the most important phases of public health. Realizing that a good health program is primarily concerned with education, we will all have to agree that the schools are the places where masses of young individuals can be taught the principles and practices of public health.

The first and most important part of school health work is that of obtaining the co-operation of the principals. To secure aid from principals and teachers one first of all has to familiarize them with nature and extent of school health work. We know that a teacher cannot teach any subject unless he or she has been informed of the fundamentals of the subject; therefore, it becomes necessary for teachers to have a fair knowledge of school health work before they can be of much help in a program. The faculty members of every school must realize that they will have to participate in the health work, especially the education program, so long as our health departments are operating with a minimum in personnel.

Health education is essential to promote and sustain the moral and physical stamina of our present-day civilization, and it should be required in each grade in school. The task of teaching children the proper health habits is easy compared to that of teaching adults. Thus an adequate number of hours should be devoted to health work by each teacher every month, in order that these habits may be definitely formed while the child is yet young. This type of program should also be supplemented sometime during the high school career by a full-year course in public health instruction. Our public schools are obviously intensely interested in teaching children vocational guidance studies, in order that they may earn for themselves a decent livelihood; yet, along with such studies, though essential they are, very little endeavor, if any, is made to instruct these same children that success in any vocation depends largely upon physical fitness. They are not advised of the relationship of proper health habits to success and happiness in life. Of the many courses taught in public schools, we do not have a required course which would teach children how to protect the most valuable thing a person can have—health. There is very little difficulty encountered in teaching a child those things which appertain to self-protection and self-preservation.

The Parent-Teachers' Associations are of inestimable value to a health officer in a school health program. The education of the parents is of vital importance. Those schools which have Parent-Teachers' Associations are far ahead of those without this organization. Health work is much easier carried on in connection with this association. One has the opportunity to bring public health education to the parents of the school children. The health officers should go before these groups of men and women at their meetings and discuss with them school health work and insist that the parents take not only an interest in but an active part in the program. There are still better means of stimulating interest among the parents. Illustrations, such as a school examination by the nurse and doctor, and dental ex-

amination and treatment by the dentist are easily carried out. To demonstrate that which actually takes place during school health work is of much value. The parents soon realize that a school health program is worthwhile and really means something to each child.

The control of communicable and contagious diseases among school children is of much concern to every health officer. It becomes the duty of every health officer to see that every child before entering school has been immunized against smallpox and diphtheria. The majority of our intelligent citizens are anxious to protect their children. However, we are always having to deal with a few people whose superstitious beliefs teach that immunization is not only useless but harmful. For such people there should be legislation to compel them to have their children protected against diseases for which there is vaccination and immunization.

Diphtheria can easily be prevented among school children. It has been customary in many places for every first grade school child who has not been previously immunized to have diphtheria toxoid. Following the immunization program among preschool and first grade children there should be a Schick testing program for the remaining grades of grammar school, and those of the first grades who have been previously immunized. After the positive reactors are immunized and Schick negative, the school will be protected.

There has been a program as previously described carried out in the Stanly County schools. Taking the advantage of a few cases of diphtheria along with wide-spread newspaper publicity, the program was very successful. Ninety-six per cent of the children from the second through seventh grades inclusive were Schick tested, and ninety-eight per cent of the reactors were immunized.

The control and prevention of tuberculosis among school children is entirely dependent upon tuberculosis clinics. Knowing that tuberculosis becomes most prevalent after children reach the age of fifteen, it has been our policy to start with the sixth grade and tuberculin test through the high school grades in one-half of the schools yearly. With the aid of the Extension Division of the North Carolina Sanatorium, those positive reactors to the tuberculin test have been X-rayed. The most important phase of a tuberculosis preventive program is that of following up the potential cases and providing for them adequate care and treatment.

Scarlet fever, measles, whooping cough and other quarantinable diseases are a great problem, especially among children of consolidated schools, because of the numbers exposed during transportation and in school. Fortunately, the incident of these is relatively low. Whooping cough is the one disease which is often spread extensively before diagnosis is made, thus making it most difficult to control.

Venereal diseases among white school children are relatively rare. However, our colored race does give much concern, especially with regard to syphilis. There is little difficulty encountered in doing a syphilis survey among the colored school children. With a co-operative principal, the so-called "blood test" can be made on all colored school children. After the cases are located, treatment should be provided.

Gonorrhea is rare, especially among white school children. The health officer's first duty in prevention of this disease in schools is to see that there is not a single closed front toilet

seat in any of his schools. With this being done, the spread of the disease is not likely to occur at school. However, every health officer will have a case of gonorrhea in a school sooner or later. When this occurs it is his duty to investigate the case and prove that its source was or was not from the school. The two cases having occurred in Stanly County schools during the past two years were proven to be contracted from parents, adult relatives, or friends. Once it becomes generally known that there is or has been a case of gonorrhea in a school, the health officer's worries just begin.

The one great problem which has made the control of communicable and contagious diseases very difficult in Stanly County schools and schools elsewhere is that of the teachers and principals trying to keep their attendance percentage as high as possible. It is perfectly natural for school authorities to keep sick children in school when they actually should be at home in bed, knowing that if their attendance falls below a certain percentage they will automatically lose a teacher. This, in my opinion, is most unfair, first to the school; and second, to the local health departments. Fortunately, the State School Commission has recently given us some relief on this matter, as set forth in the following statement included in the New School Machinery Act:

"Section 8: *Organization Statement and Allotment of Teachers.*— On or before the twentieth day of May in each year, the several administrative officers shall present to the State School Commission a certified statement showing the organization of the schools in their respective units, together with such other information as said Commission may require. The organization statement as filed for each administrative unit shall indicate the length of term the State is requested to operate the various schools for the following school year, and the State shall base its allotment of funds upon such request. On the basis of such organization statement, together with all other available information, and under such rules and regulations as the State School Commission may promulgate, the State School Commission shall determine for each administrative unit, by districts and grades, the number of elementary and high school teachers to be included in the State Budget, provided that loss in attendance due to epidemics shall be taken into consideration in the allotment of teachers."

I am unable to estimate the real value of this regulation with regard to the control of the spread of diseases among school children; however, this information should be sent to the principals and teachers of every school.

The pre-school examination is, in my opinion, the most valuable of all examinations in connection with school work. These examinations are easily made with good attendance in the city school. However, it has been found that pre-school clinics at rural and consolidated schools are attended in low percentage. An experiment has been carried out in Stanly County in connection with the rural schools which operate a summer session during July and August. The pre-school clinics are held during the latter part of this session. The attendance has been found to be nearly 100 per cent. The one great advantage to this period for examination is that it is only a short time until the farmers have all the money they will get for the year and they have not forgotten about the defects of the child which should be corrected. The results of the experiment have thus far proven that many more defects are corrected among rural pre-school children by having the clinic during the summer session instead of in the spring of the year.

School examination of the school children is very important, as we all

know. I have found from experience that those grades in which most defects are found are the first and fourth. Since it is impossible for all the children of a school to be examined during any one year, it is my opinion that these two grades are the ones of choice. During the past year the work of the health department in Stanly County has been increased by at least 100 per cent. It has been during this period that I found it most difficult to allot adequate time for school examinations. Unless there can be an increase in the nursing personnel before our next school year begins it will be necessary for the number of school examinations to be greatly diminished in number. There are twenty-four schools in Stanly County with a school population of 9,800. It is utterly impossible for two nurses to carry out a generalized well-balanced public health program and even attempt to accomplish very much in follow-up work among those children in whom physical defects are found.

The correction of defects among under-privileged children in every community depends largely upon the health officer. From my own personal experience there is nothing more valuable to a health officer than to have several organizations which are interested in school health work. There are several organizations in Stanly County which contribute substantially to the aid of under-privileged children.

The Rotary Club is now furnishing milk and some free lunches for the less fortunate children in one of the Albemarle city schools. In addition to this, the club has set aside yearly $100.00 for the tuberculosis clinic for school children.

The Lions Club has recently sponsored an eye clinic and during the past year has provided examination and glasses for fourteen children. The club has also done quite a bit of work in assisting cripple children.

The American Legion and its Auxiliary have been of assistance in many ways. They have aided in diphtheria immunization programs and done considerable work along the line of health education.

Parent-Teachers' Associations in many of our schools have provided nourishment for under-nourished and under-developed children. There have been several cases hospitalized and nursing care provided by these organizations.

The local Chapter of the American Red Cross is now conducting a tuberculosis preventive program in many of the Stanly County schools. The organization has made a very complete social survey of every case receiving aid in the form of free lunches and cod liver oil. All children who seem to be potential tuberculosis patients are given adequate nourishment at school. In addition to these, there are many children who are only under-nourished receiving aid. After six weeks a survey of these children showed that remarkable results had been obtained even during such a short period of time.

The so-called tonsil clinics are not operated in Stanly County for various reasons. However, any charity case recommended to the Welfare Department and certified by the Welfare Officer is cared for by county hospitalization and the physicians perform the operation free of charge.

Our present-day economic conditions have brought about a prevalence of under-privileged children. Unfortunately, we, as health officers, not only detect defects among these children, but we are also burdened with the responsibility of seeking medical aid and care for the less fortunate individuals.

The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

This Bulletin will be sent free to any citizen of the State upon request

Entered as second-class matter at Postoffice at Raleigh, N. C., under Act of July 16, 1894. Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

Vol. 54 OCTOBER, 1939 No. 10

ANSON COUNTY HEALTH WORK

The above picture shows the Anson County Health Officer, Dr. L. Wallin, members of his staff, and a group of women and children assembled in Morven for the regular twice-a-month medical examination of expectant mothers and conference for well babies and small children.

The Anson County Health Department, cooperating with the local agencies, the medical profession, the State Board of Health, the United States Children's Bureau, and the United States Public Health Service, is carrying out an excellent public health program.

Dr. Wallin says that "Our objective is to have under medical and nursing supervision every expectant mother, infant and pre-school child in our county. This will take time, but we are confident that within the next two years we will have reached our goal."

THE Health Bulletin
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Notes and Comment

By THE EDITOR

HUMBUGS

(Second of Series)

THE ink had hardly dried on the editorial in the August issue of the *Health Bulletin* entitled "HUMBUGS," in which a brief description was made of a nationally known faker who was welcomed to one of the civic clubs in the city of Raleigh a few weeks previously, before Raleigh was visited by another high-powered adventuress and quack. It would be just as easy to catch and kill all the fleas in a goat-house by trying to pick them up one at a time, as to enumerate and catalog all the quacks and swindlers in the field of medicine, public health, and particularly in dietetics, who now infest the land.

The purpose in calling attention in these columns to the activities of such frauds is to keep before as many people of the State as possible the warning to beware of high-powered strangers who have something to sell. It is a discouraging process, because people have such short memories and because they do so dearly love to be humbugged.

On Monday, August 14th, running through Thursday, August 17th, with afternoon and evening programs put on, one of these high-powered adventuresses not only came to town, but went to town. She operated here in Raleigh in the auditorium of the Woman's Club, one of the most respectable places in Raleigh that she could have possibly secured for her activities. We are not calling the name of this woman for two reasons. First, we do not want to advertise her, and second, many people do not understand sarcasm.

The Editor had been out of town when he received the first information of the contemplated visit of this faker. This was contained in an advertisement clipped from a Raleigh paper sent by a woman in Rocky Mount, who did not sign her name, complaining that the State Health Officer should protect the people in advance of the visitations of such fakers. The State Board of Health has been after this particular woman charlatan for several years. She manages to operate in a high-handed manner, and the lawyers, including the Attorney-General of North Carolina, the Solicitor of this District, the City Attorney of Raleigh and others, inform us that she is beyond the power of the law to reach so far. How this is, the mind of this particular layman is unable to grasp.

She comes to Raleigh, litters the platform of the Woman's Club with various kinds of medicine, which she sells at $1.00 a package up, such as adulterated salt, peppermint tea, etc.

She sells literature of various kinds. She accepts prospective victims at $5.00 an interview, for the purpose of making a diagnosis and recommending treatment to them—the treatment recommended is to enter her place on the outskirts of High Point known at present under the euphonious title of a "Sun and Diet Health Resort," for which admission she charges $75.00 in advance for one week's "treatment." If that is not practicing medicine, and in her case, surely without a license from anybody in this State, then it would be hard to define what the practice of medicine is.

To go back for a minute, on returning to town, the Editor on reading the Rocky Mount woman's letter describing the success of the swindler over there and telling how many of the women had been stung, with the advertisement clipped from the Raleigh morning paper of August 13th, which he had not seen before, the Editor immediately had his office call the President of the Raleigh Woman's Club for the purpose of making emphatic protest against this auditorium being opened to this faker. He was very quickly informed that the chairman of the House Committee had charge of these matters and to call that official. The latter was immediately called. She was not at home, but her husband answered the phone, did not know anything about it at all, but promised to give his wife our message that this "woman was one of the biggest fakers in the United States." None of our protests availed anything. She went on and put on her show, selling much of her stuff, including "medicine" and "literature," "interviewing" at $5.00 each a large number of women, and is reported to have taken eight suckers back to High Point at $75.00 a week each to be "treated and cured," some for stomach ulcers, some for cancers, some seventy year old women were to be made to look like thirty, and what have you.

This woman is said to have been arrested and put in jail some half a dozen times for giving rubber checks. She avoided any such embarrassment as that in Raleigh by simply leaving without paying any of the obligations incurred which could be evaded, such as the two deluded girls who acted as ushers for her show and promised $30.00 each, and the little boys who trotted all over Raleigh Township distributing her circulars. She paid the Raleigh printer for printing her circulars because he happened to be an old hand at the game and did not take a check and demanded the coin of the realm before he set up the type. She, of course, paid her hotel bills at the Sir Walter because there is a rigid State law that can protect hotel managements against such fakers, but she can rob her victims of any number of dollars trafficking in their health and their very lives, and the law cannot reach her.

The Editor of the *Health Bulletin* is sore on just one phase of this recent Raleigh experience, and that is, that this woman was able over his protest to secure the auditorium of the Woman's Club. That meant that she was able to insinuate to people all over the city that she was "sponsored" by the Woman's Club. This threw many unsuspecting women off their guard, in thinking that they were patronizing a respectable lecturer.

In view of this recent experience, we repeat again, that we have one urgent request to make of all our citizens from one end of the State to the other. We direct that request particularly to the officials of all the civic clubs, the school officials who

have the custody of the school auditoriums and of all organizations such as the Woman's Clubs, to set up a rigid rule and enforce it every time a stranger comes to town for the purpose of "working" the citizens. The rule is this: First, demand correct credentials; Second, check the credentials against forgery. If that simple rule were followed, it would be easy enough to close out such fakers and to dry up their source of income.

This woman spread circulars around Raleigh of about three or four different types. She used four different names, changing the initials and using the supposedly husband's initials on some of them. Each name was followed by a list of phony titles, which any intelligent individual on a hurried glance would recognize to be fraudulent. For example, on the big circular spread over Raleigh under her picture appeared the following captions: "Mrs. Blank, A. M., M. N., Cert. of Sc." Beneath is a subcaption: "Author, Lecturer, Charm Authority, Personality Analyst, Dietitian, Psychologist," etc., etc., to which we would add four little words. Guess them.

Northampton County Midwife Meeting August 7, 1939

By JOSEPHINE DANIEL, R. N., Consultant Nurse, State Board of Health

THE Public Health Nursing personnel of the Northampton County Health Department were hostesses to forty-four North Carolina Public Health Nurses on August 7, 1939. The occasion was one of special interest, because Miss Laura Blackburn, R. N., Public Health Nursing Consultant in Midwifery from the South Carolina State Board of Health, Columbia, S. C., came to teach the Northampton County midwives. Miss Blackburn is a Public Health Nurse and in addition has completed the course in Midwifery at Lobenstine Clinic in New York City.

Mrs. Mozelle Trotman, local Supervising Nurse, and the nursing personnel had equipped the stage of the Jackson High School as a one-room home. Miss Blackburn dramatized the complete procedure of a home-delivery in a realistic manner by means of "Mrs. Chase," a life-sized chase doll, and Nurse Mary Lee Mills acted the part of "Mrs. Chase's" sister.

Thirty-six Northampton County midwives were present and made their contribution by singing "Swing Low, Sweet Chariot."

The library of the school was used to exhibit the teaching material that the Northampton Public Health Nurses use in their program. These articles are as follows: A baby's bed, layette, tray, the mother's clothes, a delivery set-up including a bed, sterile pack, mother's tray and literature. Perhaps the most interesting article exhibited was an incubator for the premature or very small baby. The incubators are kept in the Health Department and can be loaned in time of need.

This demonstration to the local midwives was especially appreciated by the North Carolina Public Health Nurses, because the supervision of the local midwives is a part of every county P. H. program. In addition, a modern trend in the public health movement is to include nurse assistance at home-deliveries.

Sanitation on the Bargain Counter

Many Towns Getting Water and Sewer Lines Cheap!

By WARREN H. BOOKER, Director, Division of Sanitary Engineering

BARGAINS in water and sewer extensions! That is what it amounts to. Cities and towns are now getting their water and sewer lines extended to 100 per cent of their homes at 25 cents on the dollar through blanket WPA water and sewer projects.

Not only is this a bargain, but it is a far-reaching public health measure. There is nothing a town can do which will do more to reduce the death rate, lower the preventable sickness rate, and improve the sanitation than to supply the citizens with pure drinking water under pressure and provide water-carried sewerage in place of old privies. Furthermore, with the Government paying three-fourths of the construction cost, these water and sewer extensions will pay for themselves in not over eight or ten years, and often in four to five years, or even less.

What's more, the more progressive towns are taking advantage of this opportunity. Last month we listed seven towns that were completely sewered, or taking steps to become completely sewered. Now this list has grown to over forty, and at least fourteen small towns without water works or sewers are filing WPA projects for complete new water works and sewer systems. Many other towns are considering the matter.

And why shouldn't they? Such an opportunity has never before existed. It may not exist for long. War activities may greatly reduce the available labor supply of WPA, or eliminate it completely.

Sewer extensions will cost the town only about 25 cents on the dollar, because the free labor item furnished by WPA, required to dig, lay and back-fill sewer lines, is large, and the material item, furnished in part by the sponsor, is small. Sidewalk and curb and gutter items often cost the town 40 to 50 cents on the dollar, because the labor item is small and the material item is proportionately larger.

Our suggestion is that city officials file blanket WPA projects for complete water and sewer extensions to make every home in town available to water and sewer lines. Citizens should urge their Mayors and Boards to take action, and if more information is needed, provide for a meeting of the Board of Aldermen, or a mass meeting of the citizens, and ask a representative of the State Board of Health to address the meeting.

Plans to Further Coordinate Health Activities in the Public Schools of North Carolina

HEALTH needs in the public schools of North Carolina have been recognized for a long time. More than three decades ago discerning observers connected with, or interested in, the State's education or health services were urging that appropriate measures be undertaken to promote the health of school children through health instruction and health service. While progress in this direction has not been phenomenal, the

efforts of those early advocates gradually began to bear fruit, and today health maintenance is regarded as one of the most important aims and activities of school life.

The medical inspection of school children, as a State Board of Health enterprise, was initiated in 1915. The work was conducted under the direction of Dr. George M. Cooper, who was assisted by three full-time physicians. During the following two years medical inspection was carried out in twelve counties of the State. Legislation pertaining to school health supervision was passed in 1917 by the General Assembly, and on July 1st a Bureau of Medical Inspection of school children was established, with Dr. Cooper as director. Dental and tonsil clinics were introduced in 1918 to obviate the difficulty encountered in obtaining the correction of oral and throat defects. An appropriation of $50,000.00 by the General Assembly of 1919 made it possible for this Bureau to modify its previously unsatisfactory arrangements for financing the school health program and to employ dentists and nurses. As the years passed full-time local health departments made their appearance and relieved the State of the immediate responsibility for the medical inspection of school children in the organized areas of the State. In counties without organized health departments, however, the Bureau has continued its services in so far as practicable. In time, also, the oral hygiene service was divorced from the Bureau and was organized as a separate Division of the State Board of Health. When the State Board of Health was reorganized in 1931, the Bureau for the Medical Inspection of School Children became the Department of School Health Supervision of the Division of Preventive Medicine. A staff for this Department does not exist apart from the general personnel of the Division. The restricted field activities are now carried out by a few public health nurses, operating under Dr. Cooper's direction, in counties not having full-time public health departments. The Department shares its responsibilities with other Divisions of the State Health Department and with local health units. These responsibilities of the health organization as a whole, moreover, are shared with State and local educational authorities, and both organizations are in general agreement that physical efficiency and sound mental health are cardinal objectives toward which public school education should be directed.

The foregoing, very incomplete, description of several aspects of the lines along which education and health authorities have cooperated to facilitate health services in the public schools is sufficient, perhaps, to emphasize the importance that these organizations have attached to the maintenance of healthy child-life throughout the State. But at present there are 5,060 public schools scattered through the hundred counties of the State, with an enrollment, for 1936-1937, of 885,000 pupils, under the tutelage of approximately 25,000 teachers. Thus, when one considers the magnitude of the problem involved, one readily appreciates the attitude of the Directors of the State Departments of Education and Health that further integration of health services in the public schools would be desirable.

About a year ago, Dr. W. A. McIntosh, a representative of the Rockefeller Foundation who was undertaking a study of health administration in North Carolina, was asked to prepare and submit a tentative proposal whereby the facilities of the State

Board of Education and the State Board of Health for the execution of a unified health service in the public schools of the State might be further integrated. Such a plan was duly submitted, and, after thorough consideration and some modification by the directors of the departments and their associates, was approved.

The plan involves setting-up a small coordinating agency to represent the interests of both departments and to be jointly responsible to them. The coordinating agency consists of an advisory committee and a full-time operating staff, the latter under the direction of a State Coordinator of school health education and school health services. The advisory committee is composed of two ex-officio members, representing the State Department of Education and the State Department of Health, respectively, and three appointive members representing, respectively, the State Medical Society, the State Teacher Training Institutions, and Physical Education interests. The functions of this committee are to act in an advisory capacity to the Coordinator, and its individual members are expected to guide and assist him as technical experts in the formulation and execution of a unified school health program.

The full-time coordinating staff consists of a coordinator, a nutritionist, a physical education adviser and an assistant, a white nurse, a colored physician, a colored nurse, and two clerical assistants. The Coordinator, Dr. Walter Wilkins, assumed his responsibilities on July 1st, and it is anticipated that the full staff will be in service by September 15th. To make it possible to establish this organization and to inaugurate a program, the Rockefeller Foundation made a supplementary grant of $50,000.00, to be expended over a five-year period.

The scope of the activities to be undertaken by the coordinating agency will not include the performance of any of the duties for which local education or health personnel are responsible. Expressed in simple terms, four principal objectives will be sought: (1) adequate provisions in the teacher-training institutions to train teachers to teach health, and the provision of facilities for giving similar training to in-service teachers in the public schools; (2) provision in elementary and high schools for the teaching of scientific facts concerning health and practical methods of applying this knowledge in the everyday lives of the pupils—this will include both subjective and objective teaching—the aim being to have pupils "practice today what they learned yesterday, with the hope that it will become a habit tomorrow"; (3) the application of protective health measures by the school health personnel in such a way as to take advantage of every opportunity for objective teaching; and (4) extension of these teachings and practices into the homes of the pupils through cooperation with parents and with civic organizations in the various communities. In the realization of these aims, the purpose of the coordinating agency will be to help mobilize existing facilities which, through careful planning, will be able to execute an effective program with the available local personnel. The attitude of the central operating agency will be that health education and health service in the public schools constitute a cooperative enterprise, and that the establishment of a unified, well integrated program that will meet the essential needs of various localities will be a service of inestimable value to the entire State. In

developing such a program, it is intended that this attitude shall pervade throughout and that the end product shall not be a plan ready made by the coordinating agency, but one in which all participating agencies assisted in maturing, due consideration having been given to local problems. Moreover, it is expected that the program shall be elastic and that constant attention shall be given to possible revisions in the light of experience or the acquisition of newer knowledge.

Peppermint Tea and Psychology

By M. F. TRICE, Engineer, Division of Industrial Hygiene

IT was at the supper table that the matter was discussed, and as an advertisement in a local paper had announced, not one, but a series of lectures, my interest was mildly aroused. Mrs. Trice added that the speaker was to discuss diet and foods generally, and that her lectures were to be given at the Raleigh Woman's Club. The fact that the speaker was to use the Raleigh Woman's Club was to me an indication of a tacit endorsement of the meeting by the latter, albeit, no mention of sponsorship by the Club could be found. In the end we decided to invest the evening in a lecture.

Those who heard Mrs. Blank [the visiting swindler—Editor] speak at the Woman's Club in Raleigh must find it difficult to classify her lectures as to type. Perhaps the confusion is understandable when the abilities professed are known. She claims to be at once an author, lecturer, charm authority, personality analyst, dietitian and psychologist. It is small wonder, then, that one so learned should suffer a tendency to wander from one important science to another in the course of a lecture.

The stage props consisted of foods placed on either side of the speaker. One table was loaded with fruits and vegetables and the other with condiments, canned goods, coffee, tea and what have you.

We arrived late and immediately were subjected to a strident voice. As our seats were found, the lecturer marched to the proprietary foods table and there held aloft a bottle of vinegar. "One teaspoonful of this," she said, "will destroy a pint of good blood! And yet," she continued in an amazed voice, "there are people in Raleigh who use the stuff." "And this," she added, holding aloft a bottle of mustard, "is used as a 'vesicant,' and yet people put it into their stomachs. Think of what it must do to their innards" (or words to that effect). "You know," she said in confidence, "people look like what they eat, some of you look like mustard, some like vinegar and some are coffee-colored."

And coffee, to hear her tell about it, is vile indeed. It is nerve-shattering, acid and the cause of much distress and irritability. "Why I knew of a woman," she said, "who became a coffee fiend. Daily she brewed coffee continually, consuming more than a half-gallon a day. They finally put her in the insane asylum at Morganton, and now she goes about daily making a noise like a percolator." Ah, here was the better practice! "Drink peppermint tea," she proclaimed, holding aloft a dark-green package, "Peppermint tea will relieve indigestion, clear the system of poisons, give you vim and vitality, and—in short—make a new man or woman of you. All of our

peppermint tea comes from Germany," she informed the audience. "In our last shipment we received 50,000 boxes and now almost all of it is gone. We will be unable to get another supply when that is gone," sadly, "because Germany will not export any more." (Probably Hitler had found out about this peppermint tea business.) "But," in a tone of one conferring a blessed favor, "we have a few packages left and when they are gone there will be no more peppermint tea." Upon observing that the audience consisted of about two dozen souls, she said lovingly, as though about to part with a prized possession, "We have available only twenty boxes of peppermint tea, so be sure to get a box before you leave tonight; the price is only one dollar a box."

And, getting over into the field of charm, she said that there are people who believe that Saturday is the only night upon which people should bathe. "Do you know," quizzically, "there are people in Raleigh like that?"

Jumping back to foods, she said that tomorrow she would give all the ladies the suicide diet, guaranteed to kill a husband in thirty days. "In one town," humorously, "when I outlined the diet, so many women took notes in such dead earnest that I had to collect their notes at the end of the meeting to keep from becoming an accomplice to mass murder." She did not want the women to kill their husbands, but to feed them the healthy way. Her book, "The Proper Diet for Every Case of Impaired Health" cost only $5.00, but she would let them have it for $4.00 at the free lectures. Or they could buy "Eat Your Way to Health Nature's Way," a book with an excellent reducing system, which cost only $1.00. Then, there were other books, priced to fit any pocketbook.

And salt was a most potent poison. "Salt," she said, "why I can kill a man in two and one-half days with no more salt than is in this box," and with that she held aloft a box of salt and stood silent for the utter horror of the situation to soak into the audience.

The state of mind is important, too. Mental health is necessary to body well-being, but how can there be mental health as long as the body is unhealthy? And, maybe, peppermint tea was recommended at this point. "Anyhow," she said, "I'll tell you a story about mental health." It seems that in England about the middle of the last century a man was in love with a girl who lived in a big castle. They were to be married and on the day of the ceremony the bridegroom had to leave on a mission, but promised to return in two hours. However, something happened to him and he never came back. His bride-to-be awaited his return at a window, and so sure was she that he would return that a constant vigil was kept at a place overlooking the road by which her lover would come back to her. The years passed and she forgot the passage of time as she watched at the window, but her mind did not age and because her outlook was that of youth, she remained beautiful in body and feature. At the age of eighty she was radiantly beautiful—her teeth, her hair, her skin, were those of youth. A few years ago the British Medical Society investigated her case and reported that it was an example of complete mastery of mind over body. [Big old lie—Editor.] In her mind she thought constantly of herself as the young bride awaiting the return of her betrothed and because she was so completely youthful mentally, she was youthful bodily as well, though

more than sixty years had passed since the departure of her lover.

Those present were assured that they, too, could live to be a hundred years young. The proper mental outlook, the proper foods, and perhaps peppermint tea, were given as the panaceas. The proper mental outlook in a home, however, could not be maintained when lives were marred by petty animosities.

By that time my mental state was one of confusion. Was this a lecture on foods, a sermon, or a new version of a bedtime story? The fog lifted, however, when in the course of my mental search for an answer there came an announcement that the supply of cook books being offered was limited. Only a few remained of the lot printed for the "Century of Progress" and when they were gone there would be no more at the price quoted. The new edition would be priced higher, but inasmuch as it would contain virtually the same recipes as the old, the latter was a bargain and everyone should be sure to get one at the close of the lecture. "And don't forget," the audience was reminded, "there are just twenty packages of peppermint tea left." At one dollar a package!

DIPHTHERIA SHOULD GO

With a satisfactory immunizing agent available at small cost for every child, and free for those unable to pay anything, and with a State Law requiring immunization of all babies, diphtheria should disappear rapidly from North Carolina. It will, too, if all responsible persons, especially parents, do their duty.

The Natural History of Epidemic Diseases in a Community

By G. M. LEIBY, M. D., Consultant, Division of Epidemiology, North Carolina State Board of Health

THE function of public health may be interpreted to imply the inauguration of such control measures as will guarantee to the community, the home, and the individual protection against physical dangers and disease. It aims to suppress the dissemination of "lethal agents" in order to provide for every individual a healthful life and a maximum life span.

To successfully launch a public health program it is essential to coordinate the efforts of every worker in the community. The role of the teacher who instructs the student in fundamental concepts of personal hygiene is just as important in the eradication of tuberculosis as that of the physician who discovers the cases by skin-testing students. The minister who inspires his following to a Christ-like willingness to serve his fellow-man and make the com-

munity a more wholesome place in which to live, plays equally as great a part in the suppression of typhoid fever and malaria as that of the engineer or the entomologist who carries out the necessary technical procedures involved in the installation of a safe water supply.

When an epidemic threatens a community there are two alternatives: Either it may be allowed to run rampant and burn itself out, or we may vigorously attack it by every available scientific means and attempt to suppress it.

Tragically, there are many examples of disease running its course without being checked. We can see best what happens to a population under such circumstances by reviewing briefly the work of Dr. Greenwood, an epidemiologist of London.

He has several large experimental populations under his control. He can at will alter their food, the temperature and humidity of their environment, the amount of sunlight to which they are exposed and to a great extent their physical activities. In fact, he has every conceivable control over this population. He has a complete history of every individual in the community, with their family relationships. As a result he can at will introduce epidemics among them and measure the results in terms of death and community disorganization.

On one occasion he introduced into this healthy-controlled population one individual infected with a very contagious form of typhoid fever. Typhoid fever spread rapidly in the community. Deaths due to typhoid at first occurred slowly, then at a geometrical rate, reaching a peak in three to four weeks; finally, after six weeks or so, the daily number of deaths gradually subsided. A total death toll of nearly two-thirds of this population was ultimately recorded in this epidemic.

Mathematically plotting these deaths day by day over the six weeks' period, they were distributed somewhat like a normal curve. Psychologically, the community reaction to these deaths was recorded as at first disinterest; later apprehension; then as the death rate mounted, panic and riot, with complete disorganization of community life, later a period of apathy, and finally, reorganization. Physiologically, the strongest individuals died equally as fast as the weaker ones. It was determined that those who survived the epidemic had in their bodies a physio-chemical agent, which we call an antibody. This particular antibody protected these individuals from the disease. Some of the individuals were born with it; others acquired this antibody early during the epidemic, thus saving their lives. Because the germ of the disease continued to exist in apparently healthy individuals, its subsequent impacts were directed toward the new crop of babies as they came along. The weak variants were quickly killed off and those surviving were immune. Thus the disease became a disease primarily of the young, and as generation after generation survived, it became relatively harmless.

It is, of course, true that this community was made up of a rat population, but the record of this epidemic among these rats has been repeated many times among human populations.

When measles first appeared in the Fiji Islands in 1875 as the result of a visit to Sydney, New South Wales, by the King and his son, some 40,000 people out of a total population of 150,000 were killed within four months.

During the fourteenth century the

"Black Death" killed many millions of people in Europe. Although good medical accounts of this disease are nonexistent, the literature (of the time) reflects the moral, religious and political disorganization. Today plague has almost vanished from western civilization.

Leprosy, the scourge of Europe until the fifteenth century, has also almost been eradicated.

An epidemic of syphilis during the sixteenth century infected almost 100 per cent of the population in some areas of Europe. The disease was so acute that it killed 10 per cent of its victims within a short time after the onset. At present the violent manifestations of the disease have almost completely subsided, so that today about 25 per cent of the population who have syphilis never have a clinical symptom of it. Syphilis, however, still kills more people today than any other infectious disease, although it sometimes takes fifteen to twenty years to cause a death.

The most recent devastating epidemic with which many of us are personally familiar was the influenza epidemic during the World War. More people died as a result of that uncontrolled epidemic than were killed by bullets during the war.

These accounts of the wholesale destruction of human lives are examples of what happens when diseases are allowed to run rampant in a densely populated unprotected community. The other alternative in dealing with a disease, as was mentioned in the first part of this paper, is to vigorously attack it by all known scientific methods and suppress it. This is the role a public health administrator assumes.

With the development of the experimental method, the phenomena associated with many of the major diseases of man are brought to light. The "life cycle" of each of these diseases is worked out. Methods are instituted to suppress the freedom of action of the parasites responsible for the disease, so that finally, like other savage creatures, they are confined to the zoological garden of controlled diseases.

It must be borne in mind that diseases are not eradicated from this planet—they are only suppressed. To keep them "suppressed" it is, therefore, necessary to seek out the reservoirs of infection and control them.

On the west coast of the United States lies a reservoir of plague-infected rats and fleas, yet we have never had the "Black Death" in epidemic proportions in the United States. Once or twice a localized outbreak has occurred. The most recent epidemic was among San Francisco Chinese in 1907. This killed seven people. The methods used to curb this plague have been rat control, and the development of a vaccine. During the past decade the reservoir of plague in rats has gradually extended east of the Rockies. Last year for the first time plague-infected rats were found in Kansas and Arizona. If this reservoir extends to the more populous areas in the east, and if we do not suppress the rat more vigorously, we may look for a repetition of the "Black Death" in this country.

The fundamental methods for the control of yellow fever were worked out by Dr. Carlos J. Finley, of Cuba. His work on the mosquito as the carrier for yellow fever was confirmed by the Army Commission under Dr. Walter Reed at the turn of this century. We know that if the female of the species, Aedes Egypti, should bite a human yellow fever victim any time during the first three days of his illness, the mosquito

becomes infected. If she then sinks her proboscis into another human victim twelve days later, more than likely a new case will develop. With the institution of simple mosquito control methods, and the quarantine of yellow fever patients, yellow fever has disappeared from the United States and Panama.

Within the past few years, new threats have developed which may again cause a yellow fever outbreak in our country. The excellent work of the International Health Board of the Rockefeller Foundation has shown that large endemic areas of yellow fever still exist on the west coast of Africa and in the Amazon River Valley of South America. We also know that the entire eastern seaboard of the United States has as its common mosquito the yellow fever mosquito, Aedes Egypti. Because of the development of airplane transportation, an infected mosquito can leave South America and be in Florida within two days. Should an infected mosquito ever be able to create a spark, yellow fever might very well again spread through the United States as it did during the latter part of the nineteenth century. Fortunately, the Rockefeller Institute has produced a vaccine which has already been tried out successfully on thousands in Africa and South America. With adequate mosquito control measures, quarantine of infected cases, and the judicious use of this vaccine, there is little reason for the menace yellow fever to again threaten the people of North America.

The suppression of controllable diseases, of itself, introduces another hazard which must not be forgotten. As was noted in Greenwood's experiment, populations become naturally immune by being repeatedly exposed to the onslaughts of a disease. However, when a disease is suppressed, the "culling" out process of those unfit to survive in a polluted world ceases. Therefore, those among us who are not born with the natural immunity to certain diseases and who ordinarily would die young are able to survive. Therefore, over a period of several generations more and more of such highly susceptible persons live. Should any disruption occur in the constant vigilance which health authorities must maintain in order to keep diseases in a suppressed state, it is not improbable that many of such controllable diseases would light up and sweep again through this susceptible population as a flame through dry grass. If vigilance is ever relaxed, and the disease germs allowed free play, whole countries might be depopulated as they were in Europe during the "Black Death." Therefore, in order to assure a nation that diseases will be controlled, it is imperative that we develop a civilization conscious of its obligation to man. Everyone of us, regardless of our profession in life, must consider ourselves as deputy health commissioners. We must be instrumental in helping to maintain a sound social conscious community organization. We must provide efficiently manned and operated public health departments. In that way we can best provide the protection of the health for our loved ones.

Educating Grandma

By M. IRENE LASSITER, R. N., Harnett County Health Department

Time: 2:00 P. M.
Place: Infant Welfare Clinic, Erwin, N. C.
Scene: Clinic in Progress—P. H. N. straightening the room.

Enter young mother with baby.

Young Mother: Oh, Nurse, please help me. (Starts to cry.) My grandmother lives with us, and, Oh, I just can't stand it. Our home was so happy at first, but now we fuss all the time—morning, noon and night! Ever since the baby came we have had trouble.

Nurse: Trouble? (Nurse looks puzzled.) I don't understand you. What trouble could such a darling baby cause?

Young Mother: The baby is a darling. (Hugs baby close to her.) That's why we all fuss so. We all love him and want to do what is best for him, but gracious, that's where the trouble starts. In fact, it's the cause of all our troubles. I want to do for the baby like I'm told at the clinic, but Grandma says it's all foolishness, and my husband doesn't know which one of us to agree with. (Young Mother sighs.) So the fuss starts.

Nurse: But surely, your Grandma can see that your baby is a fine healthy baby. Why, he's the picture of health! The baby himself speaks for the care he has been given.

Young Mother: You don't know Grandma! Sure, she says the baby is nice and healthy, but so were her ten children.

Nurse: Did Grandma have ten children? Did they all live?

Young Mother: Yes, Grandma had ten children, but she only raised two. The others died when they were babies—that is, two or three years old.

Nurse: Do you know what caused their deaths?

Young Mother: Not all of them—Grandma says they died with the "itises." One had bronchitis that followed whooping cough; three had colitis, and two had tonsilitis. I'm sure those two really had diphtheria. That's how our fuss began today. The baby is supposed to have Toxoid. He was six months old Friday, and when I told my husband about it, he said all right, but Grandma came in while we were talking and she said it was all foolishness! She's always doing things like that, so we finally agreed to bring her to the clinic today and let her talk with you. She's waiting outside. Please try and show her that I'm doing what is best for the baby.

Nurse: Tell her to come and talk with me. I'll do my best for you.

Young Mother goes out to get Grandma.

Nurse: (Talking to rest of mothers at clinic.) I want you all to help me. If we can convince Grandma that we are doing the best for our babies, she will tell the other Grandmas in Erwin, and we will all be helped.

Young Mothers: (Together.) We will help you.

Another Mother: I wish it was my mother-in-law.

Grandma is heard coming down the hall.

Grandma: (Carrying baby.) Bless his little heart, Grandma will see that nobody hurts you. (Grunts disapproval.) Sticking needles in little babies—it's a shame, that's what it is.

Grandma toddles into the room.

Grandma: Howdy, folks, how are the babies? (Walking up to Nurse and holding out her hand.) So this is the Nurse! Howdy, air you married?

Nurse: How do you do, Grandma? No, I'm not married. Why?

Grandma: (Looking for a place to sit down, goes to nearest chair and settles herself.) That's what I allowed. Always did hear it takes old maids to tell one how to raise children.

Nurse: (Laughing.) I guess that's right. But I've had training with babies, so I feel that I can help these mothers some. Anyway, you watch the clinic and see if you don't change your opinion of us. We are here to help the babies and mothers, and I feel that every mother is proud that her baby belongs to the clinic.

Grandma: (Stubbornly.) I've my own mind made up about that! Never heard the like—raising babies by a book, and folks without babies telling them that has them what to do. Shucks!

Nurse picks up a baby and places it on the scales.

Grandma: Hold on! Don't you know that little fellow will fall off those things. He should be tied up in a diaper.

Nurse: (Laughing.) Not these modern babies on modern scales. They know how to take care of themselves.

Nurse hands baby back to mother.

Nurse: Well, he's gained another pound. Good work. Does he like his vegetables?

Mother: Oh, he likes them all—spinach, carrots, beets and all that I give him. I don't have a bit of trouble feeding him.

Grandma: Vegetables! Why, he's too young for such, and as much colic and colitis as I've had to care for, I ought to know!

Nurse: Yes, you should and do know, but these vegetables are special ones just for the baby. They are grown and prepared just for that purpose. Babies now can have many different foods.

Grandma: (Doubtfully.) And he won't get colitis?

Nurse: No, indeed. If his bottles and nipples are boiled and he is kept clean and away from flies and given pure boiled water to drink, he won't have colitis.

Grandma: (Shaking her head, and apparently weakening a little, says in a low voice.) And to think I lost two beautiful boys with colitis.

A baby starts to cry—Grandma starts going through her bag, pulls out a sugar-tit—starts to put it in the baby's mouth.

Grandma: There, honey, don't you cry. This sugar and biscuit will fix him up. I knowed some youngster would cry, so I fixed an extra one.

Nurse, who has had her back turned to Grandma, turns around, walks over to baby and takes sugar-tit away.

Nurse: No, sir! No sugar-tits here. You have too many clothes on the baby and he's hot. Remove his dress and lay him on his stomach and he will be all right.

Young mother does so. Baby stops crying and goes to sleep.

Grandma: Well, I never! The youngster likes it.

Nurse: Oh, yes. It's the little extras that make babies happy. The heat from your body, plus the weather, makes the baby uncomfortable. So, instead of jumping the baby up and down, treating him like a ball and making him hotter, we remove some of the extra clothes, lay him on his stomach, which all babies like, and thus the change. (Points to the sleeping infant.)

Grandma: Well, they say one is never too old to learn, so I guess I ain't neither, though heaven knows I never thought I'd live to be my age to hear such "stuff" taught! Sounds silly, just plain silly! Though now that I recollect, Mary Jane Haymer had a baby that was queer in the head, and my Pa always allowed it was caused by them jumping him up and down on their knees so much—day and night they jumped that youngster, even when he was asleep! Pa said they addled his brains, but goodness knows, the young'un would have addled everyone else in the neighborhood if they hadn't jumped him. His poor Ma didn't have time to wash her face decent. Don't guess she would have anyway.

Nurse: That brings up another problem that we are trying to aid the mothers with. How to really enjoy their children. On the little diet cards (Nurse holds up several cards) that we give each mother to keep in her kitchen, is a twenty-four-hour routine. If the mother will put her baby on a schedule, she will find that she will have a fine healthy baby, besides extra time allowed her to do little things for herself and her home.

Grandma: Maybe you know—I ain't saying you're wrong. I'm only saying one thing! I've read those diet charts, as you call them, and it might sound nice in the book, but you ain't had no baby and house and husband to cook and wash for—that makes a difference! Yes, sir! (Grandma nods her head as though she had settled the question.)

Nurse: As you say, I haven't tried to run a house and care for a baby, so let's have one of the mothers tell of her experience. I want one who has several children—children who were raised before this clinic started. Mrs. Cofield, you have had several children. What do you think of this modern way to raise babies?

Mrs. Cofield: I hardly know where to begin. Lord have mercy! Before

I came to the clinic, my house was in an uproar—seems I didn't have time to do a thing I wanted to—I kept one baby in my arms all the time and a "lap organ" pulling at my skirt to be taken up. I was tired all the time—I know that in seven years I didn't get one decent night's sleep! That's the truth! Well, after this clinic started, I began to hear about it at various places. Pa heard the men talking about it, so he said I should come. You should hear him now! Why, he says of all the children, he's enjoyed the last two best. And goodness knows it's saved a lot of wear-and-tear on me.

Grandma: Well, times has changed. Nowadays when folks have to ride all over the country and go to the movies every night and such, I guess a body does have to bring up their children accordin' to times. Come to think of it, this grand-young'un of mine does "take the cake"—sleeping from 7:00 o'clock at night until 7:00 in the morning—when I don't go just picking him up. I guess us Grandmas ought to mind our knittin' and leave raising young'uns to their Ma's and nurses. I know several more young folks that should be coming to this clinic. If they would come here, us Grandmas could get more knittin' done. I thought I was through learning, but I guess I am not. This sure has opened my eyes to so many things that Mary did I thought was crazy. Here you young'un (turns to Nurse holding out baby), where do you stick that needle? I want him to have Toxoid, too. This afternoon sure has been an education for me!

WHAT WOULD BARNUM SAY?*

P. T. Barnum, the famous American showman, is credited with having said that a sucker is born every minute. Since early childhood I have heard that accusation reiterated against man's ability to discriminate between scientific facts and gross misrepresentations made by scheming parasites who operate on the principle that people like to be deceived.

Some years ago it is possible that I defended the homo sapiens by thinking that the unfortunate truism of the early nineteenth century had died a natural death along with the horse and buggy and one-teacher schools. Surely, I thought, after the innovation of the radio and networks, now people shall know the truth. Never again may any showman, notwithstanding his power of deception, persuade people to pay admissions (or drop coins in a collection) to see "a normal man covered by a pint container."

It is indeed lucky for me that "the sorrow of disillusion" came years ago. Otherwise, a recent awakening may have been too great a shock. I attended a so-called "health session" at the Raleigh Woman's Club in order to accommode a friend and to help her win a prize. For ninety minutes I listened to a "quack" criticise surgeons, a doctor's wife, pills, the people of Raleigh, and other things in general. At the same time, she recommended her high-priced "health" articles for baldness, stomach ulcers, cancers, etc. I not only was indignant, but felt like patronizing a kicking machine for remaining —even if it was raining outside.

The procedure that was employed is nothing new. After making statements and relating stories which may have been true, the lecturer resorted to falsehoods which probably constituted the real reason for the discourse. In less than two hours I believe that I heard more positive statements made than the most brilliant doctor today could prove or disprove within the next decade.

An eighth-grader now has the opportunity to understand the causes, symptoms and treatment of diabetes. It is sad to me that we have laws which will permit an individual to lead adults to believe that diabetes may be helped or cured by drinking "marvelous mineral water," or that lost vision may be completely restored by eating a particular type of dates (at seventy-five cents per box).

I think that it is most regrettable that a person may pose as an expert, wring dollars from trusting humanity, and render services which, at best, are questionable.

It is true that any maniacal extremist may criticise the medical profession merely to gain attention. (And yet, it takes a smart person to sell adulterated salt at a dollar per box.)

*Comment by a visiting High School Science teacher on the fake "health lecturer" who recently swindled Raleigh.

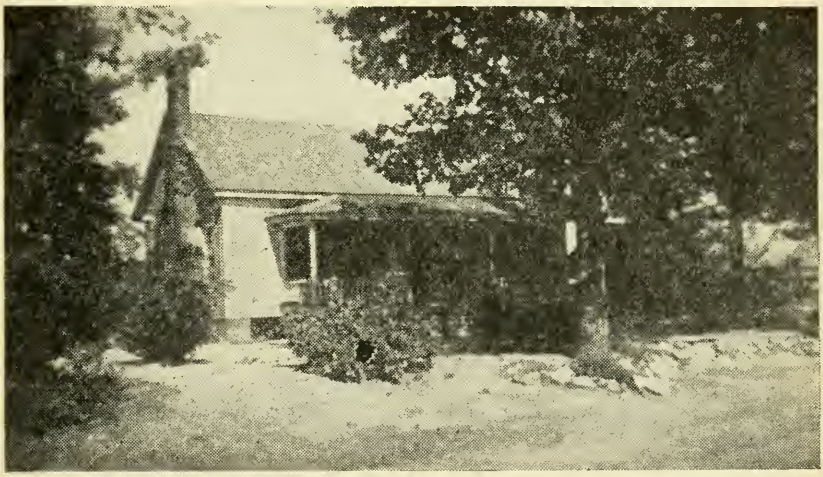
The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

This Bulletin will be sent free to any citizen of the State upon request

Entered as second-class matter at Postoffice at Raleigh, N. C., under Act of July 16, 1894. Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

Vol. 54 NOVEMBER, 1939 No. 11



TUBERCULOSIS PLAYED HAVOC HERE

In the neat frame cottage pictured above, many years ago tuberculosis played a terrible role in a family tragedy. The head of the family, a prosperous farmer, died of tuberculosis. He left a healthy wife, who lived to be eighty, and nine children. All of the children lived to reach maturity. Soon after her marriage, the oldest girl died of the disease. A few years later, the second and third daughters succumbed. Later on, the fourth daughter, who had married, died of the same disease. Finally, a son who had become a useful professional man died, making five of the nine children to go as a direct result of infection from the father in childhood. Correspondence from the State Board of Health throughout the State indicates that such a source of infection while not so widespread as thirty years ago, is still present. Tuberculosis is not yet conquered. To eradicate it will require careful and persistent efforts.

FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils
Appendicitis
Cancer
Constipation
Chickenpox
Diabetes
Diphtheria
Don't Spit Placards
Eyes
Flies
Fly Placards
German Measles
Health Education
Hookworm Disease
Infantile Paralysis
Influenza
Malaria
Measles
Pellagra
Residential Sewage Disposal Plants
Sanitary Privies
Scarlet Fever
Smallpox
Teeth
Tuberculosis
Tuberculosis Placards
Typhoid Fever
Typhoid Placards
Venereal Diseases
Vitamins
Water Supplies
Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care
Prenatal Letters (series of nine monthly letters)
The Expectant Mother
Breast Feeding
Infant Care. The Prevention of Infantile Diarrhea.
Table of Heights and Weights
Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Instructions for North Carolina Midwives.

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THE Health Bulletin
PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. 54 NOVEMBER, 1939 No. 11

Notes and Comment

By THE EDITOR

FOLLOWING a custom of many years, we are this month presenting various important items on the subject of tuberculosis. Again this year we are publishing on the outside back cover the table which we publish annually, the report of deaths from tuberculosis of the respiratory system by county and race for the year 1938. This list from year to year has afforded information as to the number of deaths, at least, for any citizen in the various counties of the State. A comparison year by year will show the progress made toward the ultimate goal, the eradication of the disease.

A quarter-century ago the slogan adopted by the workers in the field of tuberculosis was the elimination of the disease in twenty-five years. It is now seen that however hopeful such a sentiment, it has been impossible to achieve. It would be well to modify the slogan and express the hope that it will be eradicated in one hundred and twenty-five years.

Much progress, however, has been made during this quarter-century. Today not more than half as many people in North Carolina are suffering from the disease as there were twenty-five years ago; also not more than one-half the number of people die annually from the disease. This is in itself wonderful progress.

As recently set forth in one of the famous Gallup Polls, the public conception of tuberculosis is far from encouraging. For example, in that poll only 18 per cent of the people voting expressed the belief that tuberculosis is caused by a germ, and more than half of them expressed the belief that it was inherited at birth. About three-fourths of the voters, however, expressed the belief that it was contagious. People naturally fear catching diseases of any kind.

The foregoing statements indicate that there must be a radical revision and improvement in the methods of health education concerning tuberculosis. According to the journal *Diseases of the Chest*, the official publication of the American College of Chest Physicians, about one hundred million dollars have been spent on the campaign of education over a period of many years. We know from personal experience at the State Board of Health that educational efforts so far put forth are not reaching completely down into the back alleys and out into the remote rural districts. This statement is not meant as a criticism of any institution or organization, but it is simply meant as a statement of fact. Naturally, the period of twenty-five years during which time public health work has been developed in this country is a short period, as time goes in the

history of mankind. It will take many times more than twenty-five years to establish in all classes of the population a public health consciousness. It is going to take persistent, repeated and perpetual efforts, reaching into every community of the State and into every house on every block, before much more substantial progress can be achieved.

Tuberculosis Among the Negroes in Wilson and Some Means of Eradicating It

By MILDRED ARTIS, Darden High School, Wilson

WE as members of the Negro race are facing one of the most difficult problems of today. That is the disease of tuberculosis, a disease mainly of the lungs. It is a contagious disease and we should try to avoid it as much as possible.

We know that there is a great deal of tuberculosis in different parts of the United States, but we are mainly concerned with the Negroes in Wilson and vicinity. There are about sixty or more cases in the city of Wilson and over two hundred contacts. (Contacts are those persons in the home with a person having tuberculosis.) We also may note the fact that because of the many cases of tuberculosis, our sanitoriums are not able to take care of them all. Patients who cannot get in the hospitals should have the best of care in their homes.

We find that this disease is a disease of the young people. Persons likely to have tuberculosis are in their teen-age or even younger. The tubercular infection may enter the body while the child is small.

The leading cause of death between the ages fifteen and forty-five is the disease, tuberculosis, although we have within our power the means of control over it. The importance of preventing tuberculosis in the adolescent Negro is emphasized in order to protect every Negro at that age, when he may become seriously affected. The germs are easily spread from one to another in the home. Prevention of tuberculosis depends upon avoidance of germs from active cases. We often hear someone speak about tuberculosis or tell about someone who has it, but we very seldom hear anyone talk about any means of destroying this dreadful disease.

In finding this disease among our race, we should start concentrating on some means to do away with it. Healthy living is one of the things in considering the eradication of tuberculosis. Resistance against tuberculosis is increased by rational observance of daily health habits of rest, exercise, cleanliness and nutrition.

We may not be able to help those who are in a bad stage of this disease much, but we are able to help ourselves by avoiding careless contact with persons having this disease. Perhaps some of us are wondering or asking ourselves the question, "What can we do to destroy this great disease?" There are many ways in which we may do away with this disease. (1) We should try to have our children examined so as to see if they have an early stage of tuberculosis. Some of us wait until it is too late before going to the doctor. (2) Use Pasteurized milk from a reliable dairy. Some of us are too anxious to use any kind of milk. Sometimes it so happens that

the cow from which we get our milk is infected, and unless the milk is Pasteurized, we too, may catch it. (3) Avoid as much as possible contacts with those persons who cough and spit carelessly. Be especially careful to keep children away from such people. Old people frequently have coughs and spit carelessly. Keep children away from such people. (4) Try putting into practice the rules for healthy living. If we follow these rules we should have fewer cases of the disease. If we do these things we would be helping toward the eradication of the disease.

Tuberculosis is on the decrease. Yet it is still the chief cause of death among young people in our county. We owe the success we have already won to our present-day knowledge of tuberculosis and its application. It is only by helping to spread this knowledge and by using it to protect our children and neighbors that we will ever get the best of this ancient disease. The future of the Negro race depends on the conservation of its health.

Let us as members of the Negro race in Wilson try to do all we can to help eradicate this dreadful disease, tuberculosis.

Our Fight Against Tuberculosis

By PROF. J. T. TURNER, Principal, Harnett County Training School for Colored Students, Dunn

FOR the first time, Harnett County Training School, of Dunn, N. C., under the leadership of the Principal, experienced the enthusiasm which comes from exchanging holiday greetings. This exchange was brought about by the Christmas Post Office that operated for two weeks before the holidays began.

Each classroom in the entire school from First Grade to Senior Class had a mailbox made from candy boxes. Each box, cut in one end, was covered with red crepe paper and the name of the teacher and the class was posted on the outside of it. Boxes were tacked on the inside of the doors in such a way as to allow the front of the box to be taken off.

Our Post Office building was made by the Vocational Department in the form of a booth. It was decorated with red and white crepe paper inclosing the lower part from the counter to the floor.

Christmas cards were sold for one, two and three cents. Price cards were placed on the outside of the booth directly over the respective cards and seals were used to send them at the rates we shall soon give.

The Post Office was open at nearly all hours of the day, but deliveries were at specific times. Seals were sold by clerks and teachers from the booth and classrooms, respectively.

Each class had its own distributor within the class, whose duty it was to hand out the mail to the members of his class at regular intervals.

Outgoing mail was put into a large box that was handled in the same manner as our Government mail. A school stamper was used to cancel stamps on the mail and was applied by the sorter.

The staff was composed of card and stamp clerks, sorters, stampers and postmen, special delivery boys, telegram boys and parcel postmen. Card clerks attended to the sale of cards; stamp clerks were kept busy with the sale of stamps. The sorters,

at regular intervals, prepared the outgoing mails for the stampers. The duty of the postmen was to take up and distribute mail to the various classrooms on their routes. Of course, the special delivery boys were the minute men of the project. They hustled in and out delivering the special mail, but our telegram boys asked only a second for delivering the telegrams. Parcels were sent by way of our sturdy young parcel postmen, who insured the delivery of every parcel entrusted to their care.

The general staff was composed of thirty-four persons, including the class distributors. Not at all times, however, were all clerks and postmen on duty. At various times, which was due to the class schedule, certain ones were on duty. The Post Office was opened at 8:45 A. M. and closed at 3:15 P. M.

We have told you of our Post Office system, but not of our rates. Among articles to be sent were cards, letters and parcels which could be sent in three different ways—straight, special or telegram. For one cent post cards, 1 seal; for cards and envelopes, 2 seals; special delivery, 5 seals; telegram, 7 seals; parcels, 5 seals.

For two weeks we enjoyed the enthusiasm displayed by students over the project, which proved very successful. For years to come we hope to continue it as a phase of our preholiday activities.

Evidence of the success of the project was the increase in the sale of stamps. For the year 1938, Harnett County Training School sold more than 2,800 stamps. More important than the number of stamps sold is the fact that enjoyment was gotten out of the simple performance of work for a worthy cause.

Harnett County Training School is glad to have the opportunity to do its duty in a whole-hearted way to help those who need our aid in the "Fight Against Tuberculosis."

Edgecombe County's Maternity and Infant Hygiene Program

By L. L. PARKS, M. D., Edgecombe-Greene District Health Officer, Tarboro

EDGECOMBE COUNTY has had a maternity and infant hygiene program in operation for many years, since the county health department is one among the oldest in the State. This program was carried along with the generalized health program until July 1936 because of lack of funds or nurses. Greene County has also had a similar program for the past three years.

Beginning with July 1936 through funds made available from the Children's Bureau and the United States Public Health Service Funds, two additional nurses were added to the staff. One of these nurses was a colored nurse that had had special training in maternity and infant hygiene and working with midwives. This colored nurse has since devoted her entire time to this program.

In 1936, through the cooperation of Dr. G. M. Cooper, of the State Board of Health and Children's Bureau Funds, we were able to establish eight monthly health Centers in Edgecombe County, whereby any expectant mother who was not able to have the attention of a physician during her pregnancy, could attend one of these Centers. A physician or health

officer is in attendance at each of these Centers. The physician is given a small honorarium for his services at these Centers.

One may question the need of these Centers, but if a study is made we find that Edgecombe County in population consists of 60 per cent Negroes. We also find that the midwives attended 51.5 per cent of the women at the time of the delivery of their baby during the years from 1933 through 1938.

There are twenty-six midwives in Edgecombe County and the majority of these women are around fifty-five to sixty-five years of age. Many of them cannot read or write and have had no training except that given by the Health Department and what they have learned from local physicians. All midwives are colored except two.

The monthly health Centers were established in various parts of the county in order that the mothers and children could be reached without too much travel on their part. The Centers are located in Negro school buildings, midwives' homes, doctors' offices, Negro churches, or any place that could be found. Transportation is one of our greatest problems. Many mothers walk miles and miles to attend these Centers. Some come on wagons, carts or in cars.

At the Center each mother is given a general physical examination, including blood pressure examination, urinalysis, Wassermann test and weight recorded. We know that many special examinations could be made and are often needed, but the above is the minimum service given.

We consider the above as the essential things that every expectant mother should have, no matter whether she is white, colored, Indian, poor or rich.

During the period September 1936 through December 1938 we find that over 2,700 visits have been made by expectant mothers to these Centers. There has been an average of only two visits per patient, which is entirely too low. Each mother is urged to attend regularly every month as soon as she learns of her pregnancy. Practically all our cases are colored.

The mothers are taught the importance of reporting to a physician as soon as she is pregnant, but in our cases we find that only a third of them reported to the clinics before the fifth month of pregnancy.

We cannot fail to stress the importance of a routine blood test for syphilis on every mother. We have found that 14 per cent of our mothers have syphilis by means of the blood test. Of course, those mothers that have syphilis are started on treatment as early as possible. The authorities claim that if we take one hundred expectant mothers with syphilis and if they are not treated during pregnancy, eighty-four of them will give birth to syphilitic babies, but if the mothers are treated early this percentage can be cut to approximately 15 per cent of syphilitic babies. This is one special reason why every mother needs to see her physician early in pregnancy. At our clinics many of our mothers objected or refused to have a blood test when the clinics started, but now we have none of this trouble. All patients expect a blood test.

At these Health Centers we have urged the mothers to bring their babies for a general examination and at which time the babies were given the diphtheria preventive injection and general advice. We find the number of infants attending is growing each year.

The question may be raised after a few years if any results have been accomplished. The answer can be

given already in that the maternal mortality rate for Edgecombe County was 7.2 per 1,000 in 1935 and it was 2.8 in 1938. The infant mortality rate for the county was 99.0 per 1,000 in 1935 and 82.7 in 1938.

We can see that much has been done for the expectant poor mothers, but more needs to be provided for them. Service should be available for them at the time of delivery. The poor ignorant midwife still has her problems and she does the best that she knows, but every expectant mother is entitled to the service of a physician, not only during pregnancy as we have now provided, but she is entitled to a physician's service at delivery.

There can be no doubt but what our maternal deaths and infant deaths can be lowered throughout the county and State if our people work together and teach our mothers and fathers the need of better care for mother and baby during pregnancy and the baby's first few years of life.

Back to School

By ERNEST A. BRANCH, D. D. S., Director, Division of Oral Hygiene

DURING the last few days and weeks the thoughts of both young and old have been turned to the opening of school. The stores are displaying accoutrements and accessories for the young students—bookbags, tablets and pencils; clothing, and sturdy shoes for the little feet. Magazine covers and articles also feature this important event of going back to school, or the even more important occasion of going to school for the first time. The policemen are again stationed at the busy intersections to insure the safety of the children on their way to and from the schools. We have observed the grass being cut in the schoolyards and school buildings being painted and repaired in order to be ready for the opening day.

Many of you have children in your own homes for whom these and other preparations have been made. You feel that everything possible should be done for their safety and well-being. You also expect your children's teachers to be well-qualified for their part in this great undertaking.

You, yourselves, have been buying school clothes, letting out hems, sewing on buttons, darning socks, and seeing that little dresses and shirts were well-laundered to get ready for the beginning of another school year.

All of these things are very important and necessary in making your children's school experiences successful and happy, but we would like to call to your attention something even more important. That is, the physical condition of your children.

Right away you will agree with us that they should be well and strong, and that their physical handicaps should be removed. Many of you will dismiss it right there with the thought that we are talking about the children "over the river." Very few of you will realize that we are talking about the majority of the children. We do not mean that the majority of the children enrolled in the schools of our State are physically handicapped to the point that any and everybody would recognize it, but we do mean that many of them have physical defects which can and should be corrected. Some of these defects have been pointed out to the parents by the health officers, school physicians, school dentists and

school nurses, but, in many instances, the parents have done nothing about them.

Some of you will be surprised to learn that 85 per cent of the children enrolled in the schools of North Carolina need immediate dental attention. This figure was arrived at by a survey conducted, in recent years, in the schools by members of the North Carolina Dental Society.

This does not mean that 85 per cent of the children cried last night with the toothache. Fortunately, many of the 85 per cent may be saved from such suffering, for their teeth have only small cavities which have not reached the aching stage. However, they will ache if allowed to go unattended.

The very fact that most of the dental defects of your children can be easily corrected before lasting and irremediable damage occurs is our reason for telling you about them. We are urging you to apply the stitch in time or the ounce of prevention. It is much easier for the dentists, more comfortable to the children, and less expensive to the parents, to have their children's mouths inspected regularly and the dental defects corrected early and often, than it is to wait until the children have aching teeth to seek relief and assistance from the dentists.

All of us wonder why it is that so many children are in need of dental attention. We have to admit that it is because of neglect. If you think that we have exaggerated or have drawn on our imaginations in describing conditions, we suggest that you look in the mouths of your own children. You may be shocked at what you see there. If there is any fear in your mind that conditions are not as they should be, we deem it the part of wisdom that you consult your dentists immediately. Let them examine your children's mouths carefully and make whatever corrections they find necessary. This may not only save your children from much needless suffering, but it may also prevent their losing some of their "baby teeth" too early or from losing some of their permanent teeth.

When a child starts to school at the age of six he is usually cutting his six-year molars. These are the first permanent teeth that come into his mouth. If these teeth are lost they are never replaced and, sad to say, at least half of the children in our schools have lost, or need to have extracted, one or more of these teeth by the time they are twelve years of age. One cause of this is that mothers often do not realize that these six-year molars are permanent teeth. They think that they are "baby teeth" and that, since they will be lost sooner or later, they are not very important.

This line of thought contains two very serious fallacies. The first, as we have pointed out, is the failure to recognize the six-year molars as permanent teeth. The second is the very erroneous idea that the "baby teeth" are less important than the permanent teeth.

It is very essential that these little teeth stay in place until time for them to be pushed out, so to speak, by nature. They are necessary, not only for chewing food during the period of rapid growth when adequate nutrition is of utmost importance, but also to aid in the proper development of the jaw and to act as guides to the permanent teeth. We wish to emphasize the fact that no "baby tooth" should be extracted that can possibly be retained without detriment to the health of the child. There should be no need for such extractions if children pay regular visits to their dentists.

After dental defects have been corrected, there are things that you, as parents, can do to help your children to keep their mouths healthy. Of course, cleanliness is one of the greatest aids in maintaining mouth health. While we would not go so far as to say that a clean tooth never decays, we do say that it is less likely to decay than one that is not clean. Your children will appreciate your reminding them to brush their teeth before they go to school in the morning. In many of the classrooms there is a morning inspection or checking of the observance of health habits. You may save yourself and your child embarrassment by having a preliminary inspection of your own. Of course, most mothers do this, but, they too, sometimes need reminding.

Perhaps the one most common reason that some of these habits are overlooked is that, in many homes, there is a grand rush every morning, getting the children off to school and other members of the family off to work. By setting the clock to alarm even fifteen minutes earlier, the rush might be avoided and the children sent off to school looking and feeling better.

Another thing that parents can do toward helping their children have healthy teeth and gums is to give them the proper diet. Fortunately, the plain, wholesome foods that promote general good health are the foods that help to build and maintain sound, healthy teeth. Several of the current magazines give menus and lists of foods that school children should eat, daily. These same foods, milk—a quart a day—, green vegetables, fresh fruits, whole grain cereals, eggs, and meat in moderation, are the ones that we recommend for your children's teeth.

Unfortunately, there is a tendency for children to eat too much of the soft foods and not enough of the coarse foods. The diet of the growing child should include hard, brown, baked whole wheat bread to give the jaws exercise in the mastication of the food, to aid in the development of the jaws and the bony structure therein, and to cause the firmer setting of the "baby teeth" in the bony process. You will recall that the roots of the "baby teeth" are not developed when the child "cuts" a tooth. The roots develop later and are never stronger or more firmly set in the bone than is necessary. This necessity is created by the demand for real hard labor brought about by the tough, hard foods which are eaten.

We agree that too much sugar is detrimental and, certainly, our consumption is entirely too high. There are a number of other diseases attributable to sugar, but we must confine our discussion to the teeth. In the feeding of young children there should be a minimum of sweets, especially candy. Fruits can be substituted for cakes and candy, and milk should always be used instead of "soft drinks." Of the sugars, honey and molasses are laxative in nature and are preferable to some others.

Your children may surprise you sometime during the coming year by requesting that you serve more green vegetables or by suddenly deciding to drink more milk, for many of them will be taught the importance of eating the right foods and what the right foods are. They will be taught these things, not only by their teachers, but also by the State School Dentists. These dentists, who are on the staff of the Division of Oral Hygiene of the North Carolina State Board of Health, will teach mouth health to an average of one

thousand children each school day. This does not mean that they will simply lecture to the children in the school auditoriums. The school dentists will go into the classrooms to teach mouth health. They will tell the children how to take care of their teeth and will try to impress on them the necessity of doing so. We want you to cooperate with us in our endeavor to improve the mouth health conditions of your children.

Whooping Cough*

By A. H. LONDON, M. D., Durham

WHOOPING COUGH killed 170 North Carolina children last year! During this same period only 44 children died of measles. It is hoped that these figures will be remembered, for there is the feeling on the part of the public that whooping cough, while it is annoying and inconvenient to have, is not a serious disease, and therefore does not call for any unusual precautions or care. This article is one of a series authorized by the Durham-Orange County Medical Society in its effort to reduce infant mortality in this area.

Whooping cough is much more fatal than measles, in fact, four times as deadly. Yet some parents dread measles and do not pay enough attention to whooping cough. Of the 170 deaths from whooping cough in North Carolina last year, 109 were in infants under one year of age, and only 4 were in children over four years of age. Thus, infancy and early childhood are the dangerous periods for whooping cough.

How can this problem be met? Primarily, through prevention, and secondarily, through proper care. Whooping cough is started only by contact with a person who has or who is developing whooping cough. If infants are kept strictly isolated from young children, there is very little chance of their developing the disease. This is rarely possible, so the next best method is to immunize them during early infancy. This is done by the fourth or fifth month by hypodermic injections ("shots") of a vaccine at weekly intervals. This procedure will immunize from 85 to 95 per cent of children. The immunity will last about five years (past the danger age). It is not harmful, and it does not cause any serious reaction.

Once the disease has developed, many of the deaths can be prevented by proper care. The sick child should be kept indoors on bad days and in the sunshine when the weather is good, and kept away from other children, who should be guarded against exposure. The patient's meals should be nourishing; they should be given frequently and in small amounts. Very young infants should be watched constantly in order to prevent choking. Any evidence of fever should call for immediate examination by a physician. When cases are diagnosed early, injections of certain vaccines or serums may decrease the severity and shorten the course of the disease.

To Prevent Whooping Cough

Keep infants out of crowds.

Keep infants away from older children.

Immunize infants at the age of four months with whooping cough vaccine.

Give the child with whooping cough as much attention, consideration and medical care as you would if he had measles or one of the other contagious diseases.

*From a series of articles published in the newspapers in Durham under the sponsorship of the local Medical Society.

Feeding the School Child

By MISS FRENCH BOYD, Nutritionist, Raleigh

IF we hope to understand and to solve the problem of child nutrition, we must first define malnutrition and know something of its causes.

Malnutrition (poor nutrition) can be described as a condition caused by an inadequate amount of any important food element; for example, a child whose weight is normal for his age and height may become anemic because of lack of iron in his diet. Such a child can be correctly described as malnourished. The same description also fits the child who receives too little of any of the vitamins or other food elements.

There are many causes of malnutrition. We think first of the diet. For good nutrition an adequate diet is essential, but other factors must also be considered. Parents who are healthy and well-nourished give their children a better start toward good nutrition and good health than it would be possible for sick or poorly-nourished parents to give. In the older child, physical defects such as decayed and painful teeth or enlarged and infected tonsils can help to cause malnutrition. Good surroundings, including good sanitation in both home and school are also important for the best nutrition of the child. The tired, nervous child is very likely to eat poorly. For this reason, sufficient sleep and freedom from fatigue contribute to good nutrition. The child who plays outdoors in fresh air and sunshine and is given regular well-balanced meals which he can eat in pleasant surroundings, usually eats with a healthy appetite, and as a result is well-nourished. Eating between meals should be discouraged and sweets between meals should be strictly prohibited, especially before meals, because they destroy the appetite for foods which the child needs. Nagging, scolding or coaxing a child at meal time makes him nervous and irritable and often causes the formation of poor food habits, which lead to malnutrition. Parents should set a good example for the child by eating some of all foods served and by avoiding mention of food likes and dislikes. For good nutrition, the child should be given the opportunity, both at home and at school, to relax and eat his meals in pleasant surroundings.

The amounts of food that a child needs vary with his age, size, rate of growth and amount of activity. If he is given a well-balanced diet and is allowed to eat without having his attention distracted, the healthy child will eat enough to supply his needs.

In order to plan a well-balanced diet, one must know something of the food value of common foodstuffs. The following tables are included in an effort to make this knowledge available to parents and to teachers. In listing foods which supply the elements needed for good nutrition an effort has been made to include only those foods which can be easily obtained in North Carolina and, wherever possible, the most common foodstuffs have been emphasized. In these lists, the foods which contribute most to the diet as a whole and which are most common in this locality, have been classed as "best sources." For example, "sweets" and "salad dressings" have not been included as best sources of calories, because, while they do contribute many calories, they add nothing else to the diet and, therefore, contribute little to the diet as a whole.

FOOD NEEDS OF THE SCHOOL CHILD

FOOD NEEDS	WHY NEEDED	GOOD SOURCES (Best Sources Shown in Bold Type.)
1. Foods to provide CALORIES	To provide energy for work and play. To build into body fat.	**Bread** **Cereals** **Potatoes** **Butter** **Milk** **Meat** **Fish** **Eggs** Gravy Sweets Salad dressing Fruits Vegetables
2. Foods to provide adequate PROTEIN	To build muscles and other body tissues. To help build blood.	**Milk** **Meat** **Eggs** **Fish** **Poultry** **Cheese** **Soy beans** Dried peas and beans Nuts
3. Foods to provide adequate CALCIUM	To build strong healthy bones and teeth. To keep bones and teeth healthy.	**Milk** Cheese
4. Foods to provide adequate PHOSPHORUS	To build strong healthy bones and teeth. To keep bones and teeth healthy.	**Milk** **Fish** **Eggs** **Meat** **Poultry** Whole grain cereals Dried peas and beans
5. Foods to provide adequate IRON	To make red blood. To avoid anemia.	**Liver** **Lean meat** **Egg yolk** **Molasses** **Whole grain cereals** All highly colored fruits and vegetables
6. Foods to provide adequate VITAMIN A	For growth. To keep the skin and body linings healthy. To prevent some diseases of the eye.	Butter **All yellow or dark green vegetables and fruits.** **Liver** Cod liver oil* Halibut liver oil*
7. Foods to provide adequate VITAMIN B	For growth. For good appetite and digestion. To prevent constipation and diseases of the intestinal tract. To keep nerves and muscles healthy.	**Lean pork** **Dried peas and beans** **Whole grain breads and cereals** **Irish potatoes**
8. Foods to provide adequate VITAMIN C	To keep blood vessels healthy and strong. To help build and protect healthy bones and teeth.	**Oranges** **Grapefruit** **Tomatoes** **Lemons** **Tangerines** **Limes** Peaches Bananas Melons Collards Spinach Turnip greens Cabbage Turnips Irish potatoes
9. Sources to provide adequate VITAMIN D	To regulate the building of strong healthy bones and teeth. To keep bones and teeth healthy.	**Outdoor sunshine on the bare skin** Cod liver oil* Halibut liver oil*
10. Foods to provide adequate VITAMIN G	For growth. To help prevent pellagra.	**Liver** **Kidney** **Heart** Lean meat Poultry Fish **Milk** Eggs **Highly colored fruits and vegetables** **Dried peas and beans** Potatoes (Sweet and Irish)
11. Foods to provide adequate WATER	To help regulate body temperature. To help wash out waste material. To form part of all body fluids and tissues.	**Water** **Milk** **Fruit juices** **Soups**

*—Cod and halibut liver oils are highly concentrated sources of Vitamins A and D but they have not been listed here as "best sources" because they are not as generally available as other sources listed.

EVERY SCHOOL CHILD SHOULD EAT THESE FOODS

FOODS	MINIMUM FOR HEALTH	AVERAGE REQUIREMENT
1. MILK	Fresh milk, 1 pint daily or evaporated milk, ½ large can daily.	Fresh milk, 1 quart daily or evaporated milk, 1 large can daily.
2. MEAT or FISH or POULTRY	1 average serving 3–4 times a week.	1 average serving daily.
3. EGG	1 egg 3–4 times a week.	1 egg each day.
4. TOMATO or ORANGE	1 large or 2 small tomatoes, or 1 large glass tomato juice, or 1 medium size orange daily.	1 medium size orange and 1 tomato or one glass tomato juice daily.
5. OTHER FRUIT	1 serving daily.	2 servings daily.
6. OTHER VEGETABLES	2 servings daily (one should be served raw).	2–3 servings daily (one should be served raw).
7. POTATO (white or sweet)	1–2 servings daily.	1–2 servings daily.
8. WHOLE GRAIN BREAD AND CEREAL	1 serving whole grain cereal and 1–2 slices of whole wheat or rye bread daily.	1 serving whole grain cereal and 1–2 slices whole wheat or rye bread daily.
9. BUTTER	1 oz. (2 tablespoons) daily.	1–2 oz. (2–4 tablespoons) daily.
10. WATER or OTHER FLUIDS	6–8 glasses daily.	6–8 glasses daily.

If a child is underweight his calories may be increased by allowing him, in addition to the foods listed above, enough bread, potatoes, butter and other foods rich in calories, to increase his weight to normal. He should not be urged or coaxed to eat.

SUGGESTED MENUS FOR HEALTH

BREAKFAST	LUNCH	DINNER
Applesauce, cracked wheat cereal, milk for cereal, whole wheat toast, butter, milk.	Hard boiled egg, whole wheat biscuit, butter, large tomato, oatmeal cookies, hot cocoa.	Beef stew with vegetables (potatoes, carrots, onions), cole slaw, dressing, biscuit, butter, milk, prune pudding.
Tomato juice, oatmeal, milk, soft boiled egg, whole wheat toast, butter, cocoa.	Vegetable soup, peanut butter sandwich on whole wheat bread, raw carrot sticks, milk, ripe banana.	Pork liver loaf, buttered beets, mashed potatoes, cornbread, butter, baked apple, milk.
Prunes, cracked wheat, milk, whole wheat toast, butter, cocoa.	Beef stew with rice, onions and carrots, whole wheat bread and butter sandwiches, apple, milk.	Scrambled egg, chopped cabbage and tomato salad, dressing, muffins, butter, cornstarch pudding, milk.
Baked apple, oatmeal, milk, poached egg on whole wheat toast, cocoa.	Cream potato and onion soup, cottage cheese sandwich on whole wheat bread, large tomato.	Meat balls in brown gravy, boiled potatoes, string beans, biscuit, butter, milk, sliced ripe banana.
Stewed pears, boiled potatoes, scrambled egg, toast, butter, milk.	Fish chowder made with milk, whole wheat bread and butter sandwiches, raw carrot strips, apple.	Baked rice with cheese, mixed green salad, whole wheat toast, butter, prune and apricot jam, milk.
Grapefruit juice, cracked wheat, milk, soft boiled egg, whole wheat toast, butter, cocoa.	Cream tomato soup, American cheese sandwiches on whole wheat biscuit, butter, pear.	Baked fish, mashed potatoes, turnip greens, cornbread, butter, cole slaw, milk, chocolate pudding.

Visual Test For All School Bus Drivers in Martin County

By F. E. WILSON, M. D., Health Officer

APPROXIMATELY one-third of all the boys applying for permits to drive school buses in North Carolina have visual defects which should prevent them from having the responsibility of safeguarding school children from highway accidents. These are the results we have obtained after examining school bus drivers for visual defects in Forsyth, Stokes, Yadkin, Davie and Martin counties.

In Martin county the drivers were required to pass visual tests for visual acuity and accommodation this year for the first time. There were eighty-four applicants examined, most of them had been driving for a number of years, and twenty-eight, or exactly one-third, failed to pass the visual tests. Of the fifty-six who passed the tests, five were rechecked after having obtained glasses from ophthalmologists and passed. Many of those who passed were marked "questionable" because they had sluggish accommodation but were otherwise normal.

Only one boy out of the twenty-eight failures flunked only one of the visual tests, all the rest failing at least two or more tests. Three boys were found to have no vision in one eye. Four of the failures were rechecked and missed the same tests in the same way. By far most of the failures were due to an inability to focus their eyes from near to far distance and back to near. It can readily be seen that this is a very important function of the eyes in driving, especially when seeing through snow or rain and a wet windshield, or in judging distance.

These eye tests did not include errors of refraction. They were limited to normal acuity of vision and functioning of the eye muscles such as might be experienced under normal use of the eyes in driving a car or bus.

The Martin County Grand Jury was charged with investigating the safety and efficiency of the school buses and their drivers, and when these tests were explained to them they readily agreed that it was one of the best ways to safeguard the school children against highway accidents. The Health Department was commended for taking this stand for a positive health factor and it was recommended that visual tests be done on every applicant for driving a school bus in the future.

We feel that such tests are in keeping with our program of preventing ill health, accidents and personal injury, and also in bringing to light many visual defects which can be corrected before the vision is permanently impaired. It is also in keeping with our desire to urge these applicants to consult ophthalmologists for a more complete examination. A few of the boys who failed were sent to ophthalmologists for such a complete examination and three out of five were found to have more defects, such as errors of refraction, than found by our routine tests. Four of the fifty-six who passed the tests wore glasses, and only one of twenty-eight who failed wore glasses.

When parents kiss their children goodbye in the morning and see them board a school bus which carries them to and from school they should have every right to feel confident that the bus drivers are competent and can see what they are doing, and can be relied on to steer their children out of many possible accidents. Somebody should take it upon himself to insist that every school bus driver in North Carolina has adequate vision. It is every parent's right to demand that their school children are so safeguarded. It is also the obligation of the school and State authorities to see that these children who are compelled to attend school are protected from unnecessary highway hazards. It takes more ability than a highway patrolman has to determine whether a school bus driver is efficient in his driving. The Health Departments can and will cooperate to see that visual tests are required before drivers' permits are granted.

DEATHS FROM TUBERCULOSIS OF THE RESPIRATORY SYSTEM—BY COUNTY AND RACE: 1938

TOTAL DEATHS (TUBERCULOSIS, ALL FORMS) 1,853

County	By Place of Death			By Place of Usual Residence		
	Total	White	Colored	Total	White	Colored
Total, State	1,698*	647	1,043	1,495*	522	965
Alamance	10	7	3	11	7	4
Alexander						
Alleghany	1	1		2	2	
Anson	10		10	15	2	13
Ashe	6	5	1	7	6	1
Avery	6	5	1	6	5	1
Beaufort	21	6	15	24	6	18
Bertie	11	7	4	13	9	4
Bladen	13	5	8	14	5	9
Brunswick	5	1	4	7	2	5
Buncombe	291	184	107	55	32	23
Burke	10	9	1	7	5	2
Cabarrus	13	6	7	14	7	7
Caldwell	5	3	2	8	5	3
Camden	1		1	1		1
Carteret	3	3		4	4	
Caswell	12		12	12	1	11
Catawba	7	6	1	7	6	1
Chatham	3	1	2	2	1	1
Cherokee	6	6		6	6	
Chowan	10	2	8	10	2	8
Clay	1	1		1	1	
Cleveland	3	2	1	7	3	4
Columbus	6	3	3	8	4	4
Craven	21	2	19	26	4	22
Cumberland	13	5	8	13	5	8
Currituck				2	2	
Dare	4	1	3	2	1	1
Davidson	8	6	2	11	9	2
Davie	3	2	1	6	3	3
Duplin	12	5	7	16	6	10
Durham	78	18	60	79	17	62
Edgecombe	42	6	36	40	4	36
Forsyth	71	17	54	76	17	59
Franklin	16	4	12	18	4	14
Gaston	20	11	9	27	14	13
Gates	8		8	10	1	9
Graham	1	1		1	1	
Granville	8	1	7	10	2	8
Greene	8	1	7	10	3	7
Guilford	60	19	41	61	19	42
Halifax	27	8	19	29	9	20
*Harnett	12	5	6	15	6	8
Haywood	4	4		5	5	
Henderson	8	7	1	9	8	1
Hertford	9	1	8	10	1	9
Hoke	66	19	47	7	2	5
Hyde	2	2		2	2	
Iredell	11	3	8	14	4	10
Jackson	4	3	1	4	3	1
Johnston	21	8	13	25	9	16
Jones	4		4	4		4
Lee	6	1	5	5	1	4
Lenoir	32	13	19	33	13	20
Lincoln	8	3	5	7	2	5
McDowell	7	5	2	8	5	3
Macon	1		1	1		1
Madison	3	3		4	4	
Martin	16	3	13	17	3	14
Mecklenburg	71	26	45	76	28	48
Mitchell	2	2		2	2	
Montgomery	1		1	1		1
Moore	5	2	3	10	3	7
Nash	25	5	20	35	9	26
New Hanover	24	6	18	25	5	20
Northampton	19	4	15	23	5	18
Onslow	5	3	2	5	3	2
Orange	10	6	4	9	5	4
Pamlico	1	1		2	2	
Pasquotank	14	2	12	16	2	14
Pender	5		5	4		4
Perquimans	1		1	1		1
Person	14	5	9	18	5	13
Pitt	30	4	26	33	4	29
Polk	5	3	2	5	3	2
Randolph	7	5	2	10	7	3
Richmond	7	2	5	8	1	7
*Robeson	24	5	15	28	6	18
Rockingham	22	11	11	24	12	12
Rowan	19	5	14	19	6	13
Rutherford	18	10	8	19	11	8
Sampson	16	2	14	18	3	15
Scotland	12	1	11	13	2	11
Stanly	9	5	4	11	7	4
Stokes	4	4		5	5	
Surry	9	8	1	12	10	2
*Swain	7	4		8	5	
Transylvania	2	2		3	2	1
Tyrrell	3	1	2	2	1	1
Union	4	3	1	4	3	1
Vance	14	5	9	14	5	9
Wake	56	20	36	46	8	38
Warren	11	2	9	13	2	11
Washington	3		3	4		4
Watauga	4	4		5	5	
Wayne	86	9	77	46	11	35
Wilkes	9	5	4	9	5	4
Wilson	44	8	36	53	12	41
Yadkin	4	3	1	4	3	1
Yancey	4	4		4	4	

* Harnett—1 Indian.

Robeson—4 Indians.

Swain—3 Indians.

The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

This Bulletin will be sent free to any citizen of the State upon request

Entered as second-class matter at Postoffice at Raleigh, N. C., under Act of July 16, 1894. Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

Vol. 54 DECEMBER, 1939 No. 12

"WHAT DOES A BABY THINK?"

This will introduce John Calhoun Upchurch, who comes just about as near meeting the specifications for "perfect" as a baby could. He is the ten months old son of Mr. and Mrs. C. A. Upchurch, Jr., of Raleigh. His mother was Miss Margaret Calhoun, of Laurel Hill and Raleigh, and formerly a valued employee of the State Board of Health. His father is Director of the State College News Service and one of the most competent newspaper men in the State, who has written much on health subjects.

Mother's and baby's care has been based on instructions in the State Board of Health literature, which is still used regularly. Result: At ten months old, baby is in perfect health, normal in height and weight, and mother has not required the services of a physician since the baby was born.

Every one of the 80,000 couples in the State this year with a baby under one year old could have had the advantages of this invaluable literature had they had the intelligence and foresight of Mr. and Mrs. Upchurch.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils
Appendicitis
Cancer
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Diabetes
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Don't Spit Placards
Eyes
Flies
Fly Placards
German Measles
Health Education
Hookworm Disease
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Influenza
Malaria
Measles
Pellagra
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Sanitary Privies
Scarlet Fever
Smallpox
Teeth
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Tuberculosis Placards
Typhoid Fever
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care
Prenatal Letters (series of nine monthly letters)
The Expectant Mother
Breast Feeding
Infant Care. The Prevention of Infantile Diarrhea.
Table of Heights and Weights
Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Instructions for North Carolina Midwives.

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THE Health Bulletin
PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. 54 DECEMBER, 1939 No. 12

Notes and Comment

By THE EDITOR

WITH publication of this issue, Number 12 of Volume 54, another year's work is completed. For several years past, we have considered this issue the Christmas number and we have always felt like devoting considerable attention to the public health needs of elderly people, but this year there seems for some reason to be a dearth of desirable material. Perhaps, one reason is that the various War Mongers, Nihilists, Terrorists, otherwise known as dictators, have succeeded in propagandizing the entire world on war, which means the exploitation of youth along with the destruction of age. We are therefore placing emphasis this month on the grave need throughout the world for the protection of babies and very young children. After all, Christmas belongs to the children and the aged. People in middle age and the prime of life have the burden of protecting the babies and the aged members of their families at one and the same time. This is the month that the Seals are sold to aid in procuring funds for public expenditure to help provide hospital beds for older people with tuberculosis and to help protect the babies and young children from exposure to infection from that disease.

It is the month in this section, at least, of Christmas and Santa Claus' visit, the month of fellowship and good-will, and if ever there was a time in the history of the world that the need for such a slogan as the Angels brought to the Shepherds on the hills of Bethlehem was more needed, it is not known to this writer.

The birth rate in North Carolina has been running as usual rather high this year, but the infant death rate has materially declined. That gives health workers of the State considerable cause for thanksgiving. It is hoped that another year may record the continual decline in the infant and maternal death rate. There are many women and hundreds of babies living today that would not be living had the prevailing rate of even two years ago been maintained. One item that this writer would like to stress and to urge thoughtful people to bear in mind this year is the responsibility of the more fortunate class of the citizens for the health and well-being of the poverty-stricken and the diseased people that go to make up the varied population of the State. For every two children who hang their stocking on this Christmas night expecting it to be loaded with toys and material gifts and good things to eat, there is a third child that will go to bed on Christmas Eve with no such expectations. For every two children who have clean, comfortable beds in warm homes and

good clothing and an abundance of food, there is a third child whose supply of such essentials will be meager. There are still some thousands of children living in nearly every section of the State whose nutrition is below par and who suffer from many physical defects which demand expensive medical, dental and surgical attention. It is some satisfaction, however, to know that the leaders and responsible citizens of the State may be thinking in such terms rather than in terms of recruiting for war service as in so many other sections of the world.

* * * *

In a short visit with Dr. D. E. Ford, Health Officer of Beaufort County, at his office in Washington some weeks ago, Dr. Ford requested us to emphasize in the *Health Bulletin* and elsewhere a few points in Health Education. The Editor was engaged in a discussion with Dr. Ford on various problems which confronted him as a health officer in any efforts to improve the average public and personal health in his section. One of the points raised by Dr. Ford is that the high school pupils, meaning in most counties those in the grades from eight to eleven, inclusive, were not availing themselves of the health service of local health departments to the extent to which they should do to their own advantage. Dr. Ford is right in his conclusions concerning the necessity and the desirability for high school pupils taking stock, so to speak, of their health and utilizing every possible means of improving and protecting it. The writer remembers that when he was a county health officer he spent a great deal of time with school children. He remembers to this day, although it was more than twenty-five years ago, the satisfaction he gained when almost without exception the high school pupils voluntarily demanded the same inspections and the same advice which the health officer was undertaking to offer to younger children.

The health officer and the nurses in the county department of health and the sanitary inspector and the clerk in the local office, all of them are ready, or should be, at all times to help high school pupils with their problems just as much so or more so than any other class of the population. It may be that some of the high school students have gained the impression that health work is for the paupers and for the babies and small children and not for active boys and girls of high school age. This is a grave mistake and we hope that Dr. Ford's suggestion may be accepted and utilized by high school pupils in every county of the State having a local health organization.

One other request Dr. Ford made which is passed along for the benefit of the health officers especially and the accommodation of the teachers, and that is that the teachers, in complying with the law which requires a health certificate following a physical examination once a year by a qualified physician, set about to obtain such a certificate from their private physicians and to file this certificate at the time they obtain their contract for employment to teach school. This would not result in hurried examinations wherein the examining physician, private or public health officer, would be too pressed for time to take the care which he otherwise would prefer to do. The examination is for the protection of the teachers as well as the pupils in the school and should be carefully done and done leisurely along in mid-summer. As the State now employs nearly twenty-five thousand teachers annually, this

should be an important point for all of them to consider.

* * * *

One of our school nurses now at work in her twenty-first year for the State Board of Health as a school health nurse, during which time she has worked in nearly every county in the State, passes along a most interesting comment. She is now at work in one of the large counties of the State, and a few days ago broke her glasses. She writes that she tried to get along with some old glasses until the end of the week when she could visit a specialist in a nearby town for the purpose of having her glasses fixed, which of course required a new test for vision. She was anxious not to lose any time from her work. She says, however, that she had to leave school one afternoon and go on to the adjoining town to get her glasses fixed up. She says the experience, although for a few hours, made her realize more than anything else could how many miserable people there are suffering from eye strain on account of lack of glasses and because of misfits and other conditions. She said that she was miserable during this time, she could not see properly to do her work, she suffered physical pain as a result, and as it was the first experience she had ever gone through of like character, it was a new revelation to her.

This experience recalled to the mind of the Editor a story about a helpless Negro woman cook in the family of one of his neighbors not long ago. The Negro woman had made no complaint except of having some headaches and presented constantly an attitude of confusion and the appearance of working under difficulty. Her employer finally questioned her after noticing how she stumbled around and apparently felt for cooking utensils, etc. After many efforts, the lady was able to get the colored woman to one of the weekly clinics conducted for poorer people in connection with one of the hospitals in Raleigh. An examination was made, and finally for $4.00, after being authorized by the Welfare Department, suitable glasses were provided. The transformation was almost instantaneous: The poor woman had a different attitude toward everything and then confessed that she had hardly been able to see a street bus getting to and from her work. And as our nurse puts it, was miserable in many ways. The examining specialist found her vision about 70 per cent defective, practically all of which was correctible. That is an extreme case, but it serves to emphasize the fact that the world is full of much misery which could be prevented and corrected.

* * * *

A rather heartening and encouraging experience came to the Editor's desk a few days ago. Briefly speaking, it was a letter from a member of the Department of Epidemiology of the New York State Department of Health at Albany, notifying the North Carolina State Board of Health that typhoid fever had been discovered in several members of a camp for girls held up-state in New York last summer soon after the camp disbanded for the summer. One of the girls who attended this camp was a resident of Greensboro, N. C. Naturally, this Board appreciated the prompt information from the New York Board of Health and a copy of the letter was immediately sent to Dr. C. C. Hudson, Health Officer of Greensboro. Dr. Hudson has been able to report that the young girl in question had been discovered in

sound health. She had been successfully immunized against typhoid fever just prior to departing for the camp in New York.

There is still some typhoid in North Carolina every year, but it has been constantly decreasing, and this instance serves to emphasize the fact that one of the most consistent and successful public health efforts made in the State over a period now of more than twenty-five years has been the efforts to rid the State of typhoid fever. Such a report as Dr. Hudson was able to promptly provide is an illustration of the extent to which State and local health officials have consistently extended the protection against typhoid to all the citizens of the State and what is more encouraging, it illustrates the fact that the intelligent citizens of the State at least have taken full advantage of the protection offered.

While the subject of typhoid fever is under discussion, the Editor noted in the *New York Times* under date of October 22nd in a special article from Chicago that there has been an outbreak in one of the State institutions in Illinois recently in which some four hundred patients and employees were ill of the disease at that time and fifty-three people had died. Such a thing could happen in North Carolina, but it is not likely to any time soon. This item in the *New York Times* was the first information officials of the North Carolina State Health Department had of this terrible outbreak in the State of Illinois.

North Carolina has seventy-six of its one hundred counties served by organized whole-time health departments, in which some 85 per cent of the entire population of the State lives. It would be interesting in this connection to have a report as to how many counties in Illinois have well-organized whole-time health departments. It will be recalled that the headquarters of the American Medical Association is in Chicago, and naturally the State of Illinois should be expected to lead the entire Union in public health work.

* * * *

With the State Board of Cosmetic Art Examiners, a State and Federal pure food and drug law soon to function with full power, the Editor had not thought lately anything about the responsibility of reminding readers of the *Health Bulletin* that it would be well to exercise care and caution when visiting beauty shops for personal service. A reminder, however, comes to the Editor with the information that an intelligent woman living in Raleigh sometime ago arranged to visit New York and the World's Fair. Before going, she went to a beauty shop of good reputation in Raleigh and had her eyelashes dyed, along with other items of personal service. By the time she got on the train, her eyes were swollen and closed. On coming back, she reported that she stayed there ten days and did not see anything in New York the whole time. She reports that now she cannot tell one person from another on the street without her glasses. She reports that her eyes seem to be permanently injured. She went back to the beauty shop, examined the bottle containing the dye used and got the name of the so-called manufacturer that was supposed to have made the product and discovered that it was a bootleg product and that there was no such legitimate company doing business in the United States.

The purpose of recalling this item here is to caution women and girls about the danger that they expose themselves to in having such products as eyelash dye carelessly handled

around the eyes. It is an exceedingly dangerous procedure.

* * * *

There could be no better way to close these remarks than to quote from one of the school nurses who has recently worked in one of the large consolidated schools of a prosperous county. The Editor is exercising his privilege, of course, in properly editing, perhaps a little downward, some of the nurse's findings. In submitting her summary, however, for one day's work she says she found the hand-washing carried out in an orderly, quiet manner, and that it is one of the best health-teaching habits of the school. There were some other items, however, that did not please the nurse so well, such as over-crowded rooms, work tables uncomfortable and not of proper size for the pupils which puts a great deal of stress and strain on the smaller pupils. Another room was found where the light practically all day was too glaring, and what was worse, the seats were so arranged that the pupils had to face the light nearly all day, instead of having their backs to the light, with their faces against the inside wall. The boys' toilets were in bad shape, and first-aid equipment not sufficient to attend even minor cuts, stings and burns, etc. She found nutrition neglected, there being evidence of unstable nervous systems in many pupils, too much evidence of irregular sleeping habits, victims of noise and haste. The school "store," as she put it, had as its principal stock ices and sweetened bottled drinks of uncertain food value, and too much candy.

The nurse suggested that the ices and sweetened bottled drinks should be replaced with whole milk, fruits such as oranges, bananas, apples, raisins, figs, nuts, graham crackers, good quality peanut butter sandwiches, and that candy and ice cream should be reserved for after-lunch dessert only. It would seem that the nurse has offered some good suggestions.

Alcohol and Syphilis

By J. LINDSAY COOK, M. D., Epidemiologist, Greensboro Health Department

IT is an accepted fact that alcohol plays an important role in relation to syphilis, both in the acquisition of the disease and in its subsequent clinical course. Under the influence of drink, men and women are no longer able to exercise the moral restraint of which they are normally capable, but they become creatures of impulse, slaves of their baser natures; and all too frequently in a moment of alcoholic laxity a young man or a young woman will yield to the overpowering biologic urge, only to realize in a saner moment of remorse that the deadly germs of syphilis have already begun their insiduous ravages. Alcohol is the great brake-remover, the inhibition destroyer, the friendly hand that beckons to pleasant pastures and lowers the moral bars that would block the path. How often has the sympathetic physician attempted to discover the source of the infection which has led to a wrecked home or a broken life, only to be met by the remorseful reply, "I was drunk!" Truly, Bacchus plays an important supporting role to Venus in the great tragedy of syphilis.

But perhaps even more important is the unfavorable effect of alcohol

upon the clinical course of the disease. It is an axiom among syphilologists that liquor does not mix either with the disease or with the treatment. Unfavorable reactions to the drugs used in the cure of syphilis are much more common and more serious in alcoholics than in non-drinkers. Furthermore, alcohol is a nerve poison, and its predilection for the brain and spinal cord renders those structures especially vulnerable to injury by the organisms of syphilis, thereby favoring the subsequent development of serious disease of the central nervous system known as general paresis and locomotor ataxia. Alcohol damages the blood vessels, and in conjunction with the disease process, leads to early syphilitic apoplexy. The liver of an alcoholic is much more susceptible to invasion by the germs of syphilis and much less responsive to treatment. A syphilitic who drinks at all is a bad risk, and if he persists he is busily engaged in defeating the efforts of medical science in his behalf, and throwing away his chances of cure. Even mild alcoholic beverages are undesirable, and the syphilitic patient should lose no time in subscribing to the pledge of total abstinence.

The Diphtheria Situation

NOTWITHSTANDING a law was passed by the last Legislature requiring immunization of all children against diphtheria, that disease continues to be prevalent in widely dispersed sections of the State. We would like to call the attention of our readers to Dr. Davison's article published elsewhere in this issue emphasizing the fact that if all parents would obey the law, diphtheria would disappear from the State. The law requiring immunization has been on the books for several months. Yet, during the last two weeks for which tabulated reports are available prior to the time these lines were written (November 1st) 284 cases of diphtheria were reported to the State Board of Health, reports coming from more than sixty counties. At least two of these reported cases, both mild, however, are in children who had been given the immunizing vaccine three or four years ago. The children were given one dose, but neither one of the two which have been brought to our attention had ever been taken back for what is called the Schick test to determine whether or not immunity was established.

In many places now two doses of toxoid at weekly intervals are given. Dr. Davison at Duke insists on three doses, each at intervals of three weeks. Later a Schick test is made to see whether or not immunity is present. There are many factors entering into the practice of administration of toxoid, the product now generally used to protect children against diphtheria. In some instances, it has been established that the toxoid was kept too long and had lost its potency. In other cases, the toxoid became overheated and its potency destroyed. In the necessarily fast work of the average clinic these days when the health officer or the nurses working under his direction must work with high speed, it occasionally happens that a child will jerk its arm away before the full immunizing dose is injected. In short, there are many conditions for the health officer and the research physician to check up on before as-

serting that any child is 100 per cent protected against diphtheria. It has been established, however, beyond doubt that fully 85 per cent of every hundred children who are given the single dose of toxoid administered properly and using a potent product are protected against diphtheria through the most susceptible years of their lives.

We have recently read the statement by competent physicians that a negative Schick test does not indicate a permanent immunity to diphtheria. There are some conditions which may affect the result of the Schick test, such as close exposure to a virulent case, as in children in the same family, but as a rule a negative Schick test, especially if it is negative on two or three successive occasions several months apart, may be considered for all practical purposes an indication of permanent immunity, as the child is fully protected through the most susceptible years.

Right here in Raleigh about a year ago a child died of diphtheria. The records of the Wake County Health Department showed at the time that the child was given one dose of toxoid about four months previous to the attack of the disease. The child's parents did not bring the child back for the usual Schick test. After the child died, Dr. Bulla, the health officer, gave the Schick test to about twenty children in the vicinity in which the child lived and two children out of the twenty, both living in the same family, showed susceptibility to diphtheria. The Schick test should be given within sixty days after the toxoid and if susceptibility is still present, a second dose of toxoid should be given. These are all matters for the health officers and the physicians to worry about. The main thing is for the parents to give the physicians and the health officers an opportunity to save the lives of their children.

Dr. Davison reports that during a two-year period ending on the 18th of October, that of 1,461 children admitted to one of the children's departments in the Duke Hospital, that 61, or 4.1 per cent had diphtheria. These children came from eleven North Carolina counties and two of them from one Virginia county. Most of the children, however, came from Durham and Alamance Counties. This is a very high percentage of hospitalized children caused by a preventable disease.

Dr. S. B. McPheeters, health officer of Goldsboro, has for a year or more on receipt of every birth certificate filed with the Wayne County Health Department sent out a postal card to the mother of the baby urging her to see her physician and have him administer toxoid to the baby or come to the Health Department for this purpose by the time the baby is six months old. At the age of six months a second postal card is sent, reminding the mother that the time for immunization is at hand. Dr. McPheeters has reported that these procedures, with others that they are making, has increased the demand for toxoid.

"History of the North Carolina Dental Society"

Under the above heading, we clipped the reference quoted below from the Bulletin of the North Carolina Dental Society and which was written by Dr. John H. Wheeler, of Greensboro. We wish to express our appreciation to Dr. Wheeler and to the editor of the Dental Society Bulletin for the excellent comment on the great work of Dr. J. Martin Fleming, of Raleigh, in his "Hlstory of the North Carolina Dental Society."

In the opinion of the Editor of the *Health Bulletin,* Dr. Fleming's carefully prepared and authenticated history of the development of dentistry in North Carolina will be of increasing value as the years roll along. It is a painstaking work. Every item was carefully checked before publication. Not only the dental profession, but the entire citizenry of the State should feel indebted to Dr. Fleming for this monumental work. It is by far the best work of its kind that has yet been done by any citizen of this State.

The item by Dr. Wheeler follows:

"To Dr. J. Martin Fleming, North Carolina dentists in particular and the profession as a whole owes a debt of gratitude for the fine work he has done in producing the "History of the North Carolina Dental Society" as Chairman of the Committee on Publication and as Editor. Dr. Fleming begins his chronology just about a century ago and brings it up to date in a manner bordering on perfection. Anyone who gives this publication a careful reading must be impressed with the facility with which he has emphasized the personalities of the pioneers and selected those salient points which has made this history so eminently satisfactory. This history portrays very graphically the changes that have come through the years, the advancement in thought and research and the gradual shift from a purely mechanical job to a scientific profession, dealing with not only the restoration of the function of mastication, but to a realization of the fact that dentistry is dealing with the human body as a whole. One wonders at the discouragement that our forefathers met with in an effort to obtain laws that were to the advantage of both the profession and the public. This fight is still not ended; however, in recent years our legislatures have been most friendly to us and I believe we can confidently look forward to a continuance of this fine attitude. It is worth our time to review the laws that have been passed since 1879 up to the present. The papers that our Editor has incorporated in the history are well-chosen in that they give the high spots in the progress of our profession."

Character and Culture

For the benefit of any of our readers who failed to see the comment at the time, we take pleasure in passing along the short item below clipped from the *Raleigh Times* of August 17th. The item was sent out by the Associated Press, noting the speech made by Dr. Clarence Poe, Editor of the *Progressive Farmer,* before the Rural Youth section of the World Congress on Education for Democracy, held in New York at that time. The item speaks for itself and the Editor of this publication wishes to heartily endorse Dr. Poe's argument:

"An appeal for a 'useful' type of education—combining technical knowledge and an appreciation of beauty and culture, was made here by Dr. Clarence Poe, Raleigh, N. C., Editor and Chairman of the Federal Board for Vocational Education.

"Dr. Poe, presiding over the rural youth section of the World Congress on Education for Democracy, said there was a need for a system of education which would carry inspiration and color into the daily tasks of the masses of people.

" 'We need not be disturbed by those who say that in training for work and for efficiency the schools will become less useful in building character or in developing genuine culture,' he said.

" 'There is just as much culture and character training in learning how to calculate a fertilizer formula as there is in learning how to calculate latitude and longitude; just as much culture in learning the food values of the various vegetables as there is in learning to parse French sentences; just as much culture in learning how to fight the bacterial invaders of one's own body as in learning how some Roman emperor repelled martial invaders two thousand years ago.

" 'The idea that character and culture cannot be found in anything that has to do with sweat and horny hands, with the hiss of steam, the

smoke of factories and the smell of plowed ground—this is an inheritance from the dudes, fops and perfumed dandies of royal courts that we have no more use for in the twentieth century than we have for powdered queues, gold snuffboxes and violet knee-breeches'."

A Paying Investment

(Editorial from *The Chatham News*)

Chatham County might have had many more blind, crippled, delinquent and neglected children at the present time if the Child Welfare workers during the past three years had not been provided. At least five children would be permanently blind and a burden to the community, if for periods of over a year the Health Department and the Child Welfare worker had not discovered them and provided venereal treatment, regular supervision and other medical care. Twenty to thirty children who might have been hopeless cripples are now more normal happy children, with a chance to attend school and to look forward to earning their own living.

Many children who were neglected and dependent have been happily placed where they can have a chance to contribute eventually to the community.

In all, at least four hundred children have been helped in making an adjustment which will contribute to their health and happiness, as well as to the community welfare.

Preventive and corrective work is not spectacular, and often goes unnoticed in a community. It is difficult to figure out the value. If we take only the example of the five children who might have been blind today, the saving can be more easily seen. North Carolina provides a school for the blind which costs the State about $500 a year for each child. Care for the dependent blind is provided at an average of $13 per month per case, of which the county pays one-fourth. One child of ten with the expectation of living for sixty more years would cost the county at least $2,100, not including the cost to the State. The loss in earning power to the community would be tremendous. If the child could earn at least $1,000 per year for thirty years, the loss would be $30,000.

In terms of dollars and cents a community cannot afford to neglect preventive and corrective work, especially with children who are our future citizens and potentially useful and capable.

But, after all, work with the physically handicapped brings the richest rewards in the sight of once-twisted limbs made straight, once-blinded eyes made to see, once-hopeless expressions on tiny faces made happy and smiling.

An investment in the glorifying of human bodies or souls always pays the greatest dividends.

New Director for Division of Industrial Hygiene

On October 15th, Dr. T. F. Vestal became Medical Director of the Division of Industrial Hygiene, succeeding Dr. H. F. Easom, who resigned recently. Dr. Vestal comes to the State from the Worcester County (Massachusetts) Sanatorium. A native of Randolph County, this State, Dr. Vestal received his medical training at the Universities of North Carolina and Maryland, respectively. After interning at the University of Maryland Hospital, he spent five years in industrial medicine, two years in general practice, and three years as clinic physician in the treatment of pulmonary tuberculosis at Worcester. His training peculiarly fits him for his new duties, as much of the work of the Division is concerned with the pulmonary diseases resulting from exposure to industrial dusts.

Here is a picture of Hazel Inez Cox, one of the pupils in the Four Oaks school, said to be one of the largest consolidated schools in the State. She is the daughter of Mrs. H. M. Cox. The mother believes in keeping sick children out of school. When Hazel showed symptoms of sore eyes, her sensible mother kept her home for proper treatment, rather than have her sight endangered and other children exposed.

When Mrs. Cox married and set up housekeeping some twenty years ago, her father, himself an old reader of the *Health Bulletin*, requested the State Board of Health to send the publication to her. Mrs. Cox writes that she has been a regular reader for these twenty years, has reared her children according to the *Bulletin* standards and that she and her family have profited by its teachings.

School Health Work in Pitt County

Dr. N. Thomas Ennett, Health Officer of Pitt County, showed us a single-page circular while we were paying a short visit to his department some days ago which we think is so practical that we would like for all other local health departments in the State, as well as teachers, to have a look at it. The title under which the circular is printed is as follows: "Certain Health Matters Which the Principals Suggest That the Health Department Attend to Prior to the Opening of School and Others After School Opens." Then follows the two main ideas, the things to be done prior to the opening of school and the things to be done after school opens. Each suggestion is right to the point. The items follow:

"To be done **prior** to the opening of school:

1. Provide advance schedule of Inspector's visits.
2. Certification of teachers.
3. Check rest rooms and lunch rooms.
4. Sanitary inspection of school plant. Analysis of drinking water.
5. Vaccinations.
6. Some type of malaria survey and control. Results to be reported.
7. Tonsil-adenoid clinic. Cost not to exceed $10 or $12 per patient.
8. Examination of WPA workers, maids and janitors.
9. Require WPA workers to wear clean clothes.
10. Require janitor change clothes more often and keep himself clean.
11. Equip first-aid cabinets.
12. Advise school of any contagious diseases in the community.

"To be done after school opens:

1. Medical examinations by physicians and dentists.
2. Examine all athletes.
3. Examination of eyes, ears, nose and throat of all children.
4. Check for required vaccinations.
5. Monthly sanitary inspections. Monthly check on water.
6. Keep an accurate check on all contagious diseases. Quarantine all

who are supposed to be quarantined.

7. Frequent visits to the schools, checking the cleanliness of all the pupils. If possible, spend more time in the schools.

8. Vaccinate for smallpox immediately after school opens.

9. Inspection of all children for which no health records are available.

10. Visit the school more during the school term.

11. Make talks in Chapel to supplement and coordinate the health work of the Health Department and the school.

12. Keep a health check on the pupil.

13. Inspect all grades three times during the school year.

14. Provide lectures for adolescents on personal hygiene.

15. A definite follow-up of all defective cases found on inspection trip.

16. Provision for proper first-aid supplies and sponsor training courses in same.

17. Assist with clinics in all fields requested by the administration.

18. Coordinate work within the school with that of the Welfare Office and all local committee Health and Welfare groups."

More About Whooping Cough

Dr. W. R. Parker, Northampton Health Officer, has recently reported that four infants in that county had died from whooping cough. He says that it is almost impossible to make some of these mothers realize the importance of this disease and to try to keep their children isolated so far as possible, especially during their first year. Dr. Parker is much interested in Dr. London's article in the October issue of the *Health Bulletin*, in which Dr. London very concisely stressed the things which may prevent whooping cough and which every parent should follow.

Dr. Parker concludes his statement with the following: "The further I go into this work, the more I realize that our greatest handicap is ignorance and poverty, and the more we are determined to help these poor unfortunates as much as possible."

Diphtheria Would Disappear in North Carolina if all Parents Would Obey the Law*

By W. C. DAVISON, M. D., Dean, Duke Medical School, Durham, N. C.

ON March 17, 1939, the General Assembly of North Carolina enacted a law requiring the parents or guardian of all children in North Carolina between the ages of six months and five years to have these children immunized against diphtheria by the physician of their choice or, if they are unable to pay, by the County Health Officer, or pay a fine of $50.00 or be imprisoned for thirty days. Some parents are obeying the law and protecting their children, but many are disregarding it. A fine of $50.00 or a prison term of thirty days should be enough to make all parents do their duty. However, this article is an appeal to them, authorized by the Durham-Orange County Medical Society to consider the dangers of diphtheria to their children, and to give them this protection. Remember, that 5 per cent of all the white children and 3.5 per cent of the colored children who have been patients in Duke Hospital were admitted because they were suffering from diphtheria. It was not their fault, but that of their parents, who not only disobeyed the law, but worse still, disregarded the safety and health of their children! Judging by the cases of diphtheria which are occurring now, this will be a

bad diphtheria year! Usually, most of the cases are in the winter months, but this year, several have occurred in July, August and September.

Last year in North Carolina, 2,056 children needlessly had diphtheria, and 168 of them died from this disease; some of them were from Durham County. None of these children would have died if their parents had taken them at the age of six months to their physicians for "shots" of diphtheria toxoid. Two or preferably three of these shots should be given at intervals of three weeks. One dose does not always protect. A Schick skin test should be done three months later, and also every year, to be sure that the child is protected against diphtheria. Schick tests also should be done on children who have had diphtheria, for they may have it again unless they are protected.

If mothers would ask their physicians or health officer to use "combined diphtheria and tetanus toxoid," the child would be protected against both diseases—diphtheria and tetanus (lock-jaw). **Why not obey the law and do it today?**

In cities in which most of the children have been protected against diphtheria, the disease has almost disappeared, and no children die from diphtheria. Why are not all of the children in Durham protected against diphtheria, and why do some Durham children die from diphtheria? Practically all mothers of infants born in Durham are told of the benefits of shots against diphtheria, so why do not they take their children at the age of six months to their physicians for this protection? Probably there are three reasons—some mothers may be careless and forgetful, others may be ignorant and are afraid of the shots, and the remainder may not know that the physicians of Durham, the Health Department, the well-baby clinics, and the Watts, Duke and Lincoln Hospitals are ready and willing to give babies these shots, whether or not their mothers can pay the usual fees. If your child is between the ages of six months and five years and has not been protected against diphtheria, **see your doctor today.**

Diphtheria is a common disease in cities like Durham, in which many of the children are not protected by shots. Some of the children, who get diphtheria, have sore throats, others have a running nose, and the smaller children become hoarse, croupy and have difficulty in breathing. If the child is promptly taken to a doctor and given diphtheria serum, recovery is rapid, though some of the younger children may have choking attacks and need a silver tube planted in their throats so that they can breathe while the diphtheria serum is curing them.

Unfortunately, many mothers at first think these children have "colds" or croup, and do not take them promptly to a physician. During the next few days, unless treated with serum, these children become more and more listless, and when finally taken to a doctor, it may be too late for diphtheria serum to save their lives.

Although diphtheria can be cured if serum is given soon after the disease starts, no children should ever have diphtheria if they have been taken to the doctor to have shots as soon as they have reached the age of six months, and have repeated Schick tests. If parents, who read this article, have children who have not been protected against diphtheria, and do not immediately have them protected, they can only blame themselves if diphtheria strikes their homes. Do not take the chance of

postponing protection. It is too tough on the children, as 8 per cent of those who have diphtheria die.

If every mother could see only one infant with severe diphtheria, rolling from one side of the bed to the other, straining every muscle to get air, eyes popping, and the awesome look of fear, she would not hesitate further in having this protection for her own child.

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*From a series of articles published in the newspapers in Durham under the sponsorship of the local Medical Society.

State Board of Health Radio Talk

By WILLIAM H. RICHARDSON, Interviewer, and D. S. ABELL, Speaker

Subject: "THE WATER WE DRINK"

RICHARDSON: Good afternoon, Ladies and Gentlemen.

"Little drops of water,
Lit le grains of sand,
Make the mighty ocean. . . ."

O, well; you know the rest of it. Last week Mr. M. F. Trice, of the Division of Industrial Hygiene, told you something of the relation of dust to health, and this week I have asked Mr. D. S. Abell, Principal Assistant Engineer of the Division of Sanitary Engineering, to tell you what's in one of these drops of water that we first heard about in the nursery rhyme—and the relation of the drop of water to the health of the individual and of the community. How about it, Mr. Abell?

ABELL: Thank you, Mr. Richardson, it is a pleasure to have this opportunity. As compared with water supplies in other parts of the world, very few of us realize the great convenience and health benefit from our American public water supplies. In fact, in many parts of the world even small quantities of good drinking water are almost impossible to obtain.

RICHARDSON: I understand that missionaries and travelers in the Orient are very careful about their drinking water because of cholera, typhoid and dysentery, and that there is an unbroken rule that no water is considered fit to drink unless a white person has actually seen it boiled.

ABELL: You have probably heard the story of the Hindu who after visiting in New York City was asked what he would like to take back with him to India. He said that more than anything else he wanted the "magic faucet" from which he could obtain great quantities of clear, sparkling water.

RICHARDSON: Well, he had something there, didn't he?

ABELL: Did you ever stop to think how much we depend upon that faucet which yields water under pressure? People in this country have come to expect that any water which can be obtained from an ordinary faucet is good to drink.

RICHARDSON: I guess you are right.

ABELL: If that is the expectation of the public, then all water under pressure must be of drinking water standard, if it is available for human consumption. That is certainly a challenge to municipal and water works officials and public health engineers.

RICHARDSON: I was just thinking, water is the only commodity that a municipal government actually produces, distributes, and sells that is used for human consumption.

ABELL: Yes, and that's just the reason why we feel that the man who has charge of the operation of a water treatment plant should be a man of adequate education, training and experience, a man with a high sense of public responsibility.

RICHARDSON: Well, Mr. Abell, isn't that the case? Do we not have trained operators, competent men in charge of our plants?

ABELL: Yes we do, for the most part. North Carolina can well be proud of her water works men. We should bear in mind, however, that these men are appointed by municipal officials who are sometimes under very strong local pressure to employ someone who is poorly trained or equipped to do this important work.

RICHARDSON: Why, I do not un-

derstand this situation. It seems to me that the man who has the greatest responsibility of anyone in municipal employ is the man who operates the water treatment plant. Is there not some law which requires that this man be as well fitted for his position as is the man in charge of a steam boiler, a practicing engineer, an attorney, or a physician?

ABELL: No, I am sorry there is no law which requires minimum standards of education, training and experience for men operating water plants. Of course, the State Board of Health exerts a great deal of influence, and there is a great deal of appreciation on the part of most municipal officials of the importance of this service. I should say that minimum standards are now being set up for consideration at the Convention of the North Carolina Section of the American Water Works Association, which is to be held next week in Charlotte. It is expected that standards for water purification plant operators will be developed, which will command the respect of the citizens of the State and assist the operators to develop and improve in their profession, which is so vital to the public welfare.

RICHARDSON: By the way, Mr. Abell, have you seen the large-scale operations being conducted at the Raleigh Water Plant? After that is completed, the people in Raleigh can be proud of their water supply.

ABELL: You are right, that will be a modern plant in every respect, and water works engineers will be coming from all over the country to see that plant in operation. Mr. Richardson, did you ever stop to realize that in spite of the tremendous investment in water systems, making, in fact, the business of water supply one of the large industries in the State, water is actually delivered under pressure at your door at an amazingly low price. If you purchased all of the following commodities by the ton you would pay: $8.00 for a ton of coal; $75.00 for a ton of gasoline; $150.00 for a ton of milk; $200.00 for a ton of bread; $500.00 for a ton of meat, and only 7c for a ton of water F.O.B. your faucet at your command ready to use.

RICHARDSON: Well, that is all right, isn't it?

ABELL: Yes, and that means that this water must be: Clear; attractive to taste and smell; safe from a public health standpoint; non-corrosive to plumbing; soft for laundering, and satisfactory for steam-boiler and other industrial uses. These requirements make necessary engineering skill of a high character in designing and constructing our plants and distribution systems, and expert operation of our purification plants.

RICHARDSON: Yes, I guess we should be thankful for the large volumes of pure and inexpensive water which we have available. I suppose our water and sewer systems pretty well cover each municipality.

ABELL: That is one thing we have been vitally interested in recently. To determine just where water and sewerage service was lacking, the wide-awake sanitarians of many of our local health departments have made spot-maps. These maps reveal that practically every town in North Carolina had a fringe of insanitary conditions around the border inside the corporate limits. These border areas of poor sanitation are a menace to the public health of the entire community.

RICHARDSON: It seems to me that wide-awake business-like municipal officials would want to have their water works plants used by as much of the population as possible to take maximum advantage of the investment.

ABELL: You are right. The better-managed cities are taking advantage of this opportunity, especially now, since the WPA is glad to give the common labor, together with some funds for materials, to construct extensions to water and sewer systems.

RICHARDSON: Are many towns taking advantage of this opportunity?

ABELL: To tell the truth, Mr. Richardson, we are very pleasantly surprised at the reception given this idea by municipal officials. We now have a list of sixty-three municipalities where the officials have said that we are going to extend water and sewer lines so that these facilities will be available to 100 per cent of the community.